INSTALLATION & OPERATION MANUAL

IP CAMERA
LC-7314

(PAL)

APPRO®

Table Of Contents

SAFETY PRECAUTIONS

All the following safety and operational instructions to prevent harm or injury to the operator(s) or other persons should be read carefully before the unit is activated.

WARNING

- To prevent fire or shock hazard, avoid exposing this unit to rain or moisture.

- Do not block ventilation openings.

- Do not place anything on top of the unit that might spill or fall into it.

- Do not attempt to service this unit yourself, as opening or removing covers may expose you to dangerous voltage or other hazards. Please refer all servicing to your distributor / retailer.

- Do not use liquid cleaners or aerosols for cleaning.

- To prevent fire or electric shock, do not overload wall outlets or extension cord.

- This unit must be grounded to reduce the risk of electric shocks.

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1. PRODUCT FEATURES

1.1 Product Instructions

The newly designed H.264 / MJPEG stream IP camera provides simultaneous video codec streams of H.264 and MJPEG in 520 TV lines. This IP camera not only supports the 25 fps frame rate, motion detection and built-in microphone, but also the day and night, and pre- and post-alarm functions. In addition it hosts the powerful Multi Profile function which enables the simultaneous use of different rates of resolution while allowing two video codecs to connect with computers at the same time. Apart from this, the camera brings you four comprehensive and advanced user-friendly PnP operations, and captures alarm and scheduled recordings by using an SD card. Besides, when this IP camera connecting the auto iris lens, and the IP camera makes available the Auto Iris mode which can easily be turned on or off with the help of the switch on the camera's side panel. In this mode the ALC function can also be activated.

This new generation H.264 network camera offers a more progressive digitalized image technology to thoroughly update your surveillance capabilities.

1.2 Product Features

Camera:

Image sensor:	Sony 1/3 inch interlaced CCD
Image co-processor:	Sony HQ1 DSP
Minimum Illumination:	Color 0.5 lux@F1.2
	B/W 0.03 lux@F1.2
Lens type:	CS (C mount adaptor can be used)
Shutter time:	1/50~1/100,000sec (PAL)
Sensor resolution:	440K pixels (PAL)
Horizontal resolution:	520 TV lines
Auto iris type:	DC drive
Exposure:	AES/Auto-iris
S/N Ratio:	50db with AGC off
Day & Night:	Mechanical IR filter
Day & Night mode:	Auto/Day/Night/Schedule

Video Signal:

Video output type:	BNC
Video output level:	1.0 Vpp +/-10% 75Ω, composite, Negative (BNC unbalanced)
Video output frequency:	-3dB +/-1dB at 3 MHz (25 fps, best recording)
Video output burst level:	300mv(PAL) +/- 10 %
Synchronization:	Internal

Video Codec:

Video compression:	H.264
	Motion JPEG
Resolutions:	720 x 576 (PAL) 352 x 288 (PAL)
Video streaming:	Simultaneous H.264(720 x 480 and 352 x240)

Video Codec – MJPEG:

Motion JPEG frame rate:	Up to 25 fps at 720 x 576 (PAL)
Motion JPEG rate control:	Yes
Motion JPEG quality level:	5

Video Codec – H.264:

H.264 Frame rate:	Up to 25 fps at 720 x 576 (PAL)
H.264 frame rate control:	Yes
Customized H.264 bit rate:	Yes
H.264 bit rate control:	Yes
H.264 quality level:	5

Image:

AWB:	Auto/Indoor/Outdoor/Push Hold
ALC adjustable:	Yes
Flickless:	Yes
Mirror:	Yes
High speed shutter:	1/1000 second
Back light compensation:	Switchable
Saturation:	Adjustable
Sharpness:	Adjustable
Contrast:	Adjustable
Brightness:	Adjustable
Privacy Area:	Programmable 3 independent zones
Motion Detection:	Programmable 96 independent zones
Motion Detection Sensitivity:	5 levels
Customized motion detection sensitivity:	Yes
Digital PTZ:	Yes
OSD:	IP Address/Date/Time/ICON
Timestamp:	Title/Date/Time

Software Platform:

Operation System:	Proprietary OS

System Integration:

System Requirement:	Microsoft Windows 2000
	Microsoft Windows XP
	Microsoft Windows Vista
Remote Access Software:	Microsoft Internet Explorer 6.0 or above
Network API:	SDK/CGI/DLL
Recording Software:	16 channel free-bundled CMS

Alarm:

Alarm triggers:	Motion Detection
	Schedule
	Alarm input
	Ethernet loss
	Network/Remote digital alarm input
Alarm application:	SD recording
	SMTP
	FTP
	CMS recording
Alarm duration:	Programmable
Schedule counts:	7

Network active alarm notification: Yes (ANNP)

Hardware:

Processors:	Texas Instruments DaVinci High performance 32-bit RISC CPU
DDRII memory:	DDRII 1Gbit
Flash memory:	256Mb
Real-time clock:	Built-in
Real-time clock battery:	Built-in
Watchdog:	Built-in
Firmware upgrade:	SD Card/FTP/HTTP

Approvals:

FCC:	Yes
CE:	Yes
RoHS:	Yes

Power:

DC 12V:	Yes Max (TBD Watt)
AC 24V:	Yes
PoE:	Power over Ethernet (IEEE 802.3af)

Physical Property:

Height:	50mm
Width:	62mm
Length:	95mm
Weight:	360 g
MTBF:	1350000Hours
Operating Temperature:	0℃ to 50℃ (32℉ to 122℉)
Operations Humidity:	30% to 80 %
Storage temperature:	-20℃ to 60℃(-4℉ to 140℉)

Audio Signal:

Number of tracks:	Mono 1 channel
Audio sample rate:	16 KHz sampling-ulaw
Audio output:	1K ohms
Audio input:	Built-in Microphone or LINE in10k ohms 1.0Vpp
Network Audio Stream:	Available

USB:

Type:	2.0 * 1
Capacity:	24Mbit
Network settings configurable:	Yes

Network:

Ethernet:	Ethernet (10/100 Base-T), RJ-45 connector
MDIX:	Yes
Security:	3-Level password protection IP address filtering User access log
Protocol:	TCP/IP, UDP, ARP, ICMP, DNS, DHCP, HTTP, SNTP, PPPoE, DDNS, UpnP, FTP, SMTP
Management console:	Full function
Throughput:	19M bit/second
Bandwidth control:	Yes
Simultaneous users:	8
DDNS:	Dyndns
IE recording support:	Yes

Storage:

SD Card Support:	MMC/SD/SDHC 2.0 32MB~32GB
Pre-alarm:	Yes

File system:	FAT32/16/12
Recording format:	JPG/AVI
Network play-back:	Yes
SD card brand verified:	A-Data/ PQI/ Toshiba/ Transcend/ APacer/ Photo Fast
Device Indicator:	
Ethernet Link:	Yes
Ethernet Active:	Yes
System Operation:	Yes
System Warning:	Yes
Accessories:	
Accessories:	USB cable
	CD-Rom
	C-Mount ring
	Power Adapter
	Quick installation guide
PTZ Support:	
Protocol:	Pelco-D
I/O Ports:	
USB:	2.0 x1
DHCP/Static IP switch:	1
DC IRIS/AES switch:	1
Factory Reset:	Yes
RS-485:	Yes
Alarm input:	1
Alarm output:	1
Alarm reset:	1
Audio I/O:	1
DC-OUT:	1

2. DESCRIPTION OF THE FRONT/REAR VIEW

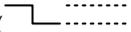### 2.1 Front Panel and Rear Panel

-- Front Panel --   -- Rear Panel --
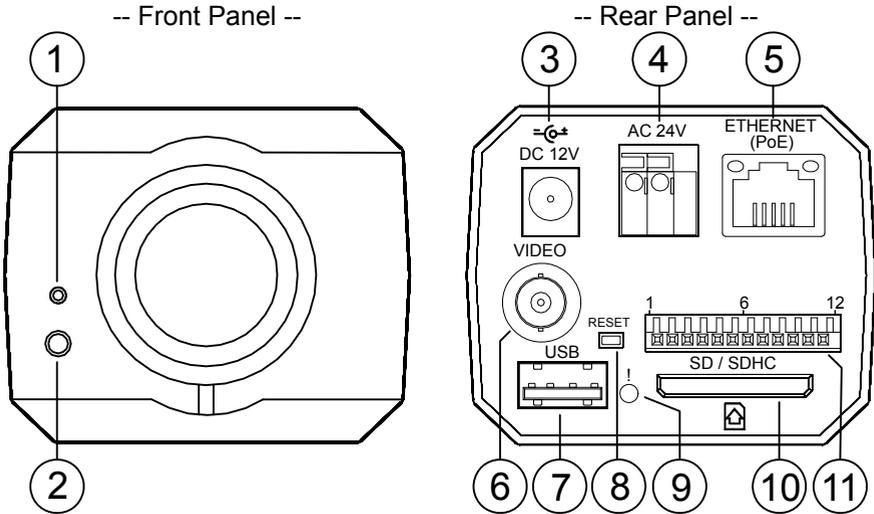
1. **MICROPHONE:** The IP Camera has an additional audio function. The device has a microphone built into its front panel which records sound.
2. **POWER indicator:** Indicates the power status of the unit.
3. **Plug Inlet:** A DC 12V inlet that connects to an external power supply.
4. **Plug Inlet:** An AC 24V inlet that connects to an external power supply.
5. **ETHERNET 10/100 Connector:** This is a standard RJ-45 connector for 10/100 Mbps Ethernet networks. PoE (Power over Ethernet) function: Provides power to the device via the same cable as used for the network connection.
6. **VIDEO OUT Connector:** The connector provides the unit's composite video signals to a monitor.
7. **USB port:** The user can use a USB device cable to connect the IP camera to the USB port on the PC.
8. **RESET:** Recover to factory default.
9. **LED indicator:** The green light indicates the unit is activating and the SD card cannot be removed.
10. **SD CARD slot:** This is used for system software updating and archiving / accessing critical images.
11. **ALARM I/O:** This is a 12-PIN connector including the **ALARM IN/OUT, ALARM RESET**, **GROUND** and **AUDIO** items for connecting with external devices.

2.2 ALARM I/O

```
1.ALM-OUT A    7.RS-485:D+
2.ALM-OUT B    8.RS-485:D-
3.ALM-IN +     9.DC-OUT(5V)
4.ALM-IN -     10.GND
5.ALM-RST +    11.AUDIO-IN
6.ALM-RST -    12.AUDIO-OUT
```

1 & 2. ALARM OUT (OUTPUT): This is an alarm output trigger. Connect this to external devices such as buzzers or lights. (⌐ ------- 5V, 20mA └------- 0V(Active))

3 & 4. ALARM IN (INPUT): This is an alarm input that can be programmed in the menu system to active low. (⌐ ------- 5V, 20mA └------- 0V(Active))

5 & 6. ALARM RESET (INPUT): This pin connects to an alarm-clear device for clearing an alarm. (⌐ ------- 5V, 20mA └------- 0V(Active))

7.   RS-485 D+

8.   RS-485 D-

9.   DC OUT (5V)

10.   GND: Ground contact.

11.   AUDIO IN

12.   AUDIO OUT: This provides the unit's audio signal to a speaker.

2.3 Flank Panel
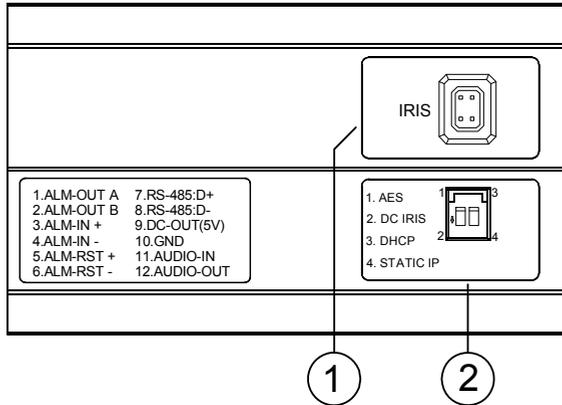
1. **IRIS:** Auto iris connector.

   This camera works with a DC drive auto iris lens. Please refer to the pin assignment

   marked on the camera when connecting the auto iris lens

2. **DIP Switch:**

1 3 ⬛⬛ **2 4**	**1. AES:** Auto electric shutter.
	2. DC IRIS: Use an auto iris (DC drive)
	3. DHCP: Turn On / Turn Off to use the DHCP protocol. If the switch points upwards, the device can change the setup of network function (enable/disable) via the network.
	4. STATIC IP: If the switch points down, the device can't obtain an IP address from the DHCP server. This option is needed to configure the network communication settings.

2.4 The USB function

By connecting the IP Camera with a PC via the USB connector, the IP Camera can provide two different functions.

1. Insert an SD card: As a card reader.

   Insert an SD card into the IP Camera, then connect to the PC. You might transfer files between the SD card and the PC. Once you've connected your IP Camera to your computer, the Windows system will detect the connection and ask you what you want to do with your SD card.

   In another words, if the user connects the IP Camera with an SD card and the PC via the USB connector, the IP Camera can be used as a normal card reader.

2. Remove an SD card: As a configuring tool.

   Before using the USB configuration setting page, please remember to remove the SD card or your PC will read the SD card and won't show this window.

DHCP ON   **DHCP OFF**

WARNING: After changing the settings, please click the "Apply" button. All of the options will be effective after removing the USB connector.

3. INSTALLATION

Please follow the instructions and the diagram below to set up the system.

NOTE: The IP Camera is linked by its Video Out connection via a BNC connector to a monitor's Video In connection. If this connection is there, you can see some information on the monitor screen, such as the IP Camera factory default Static IP address(192.168.1.168). But the IP Camera Static IP address can only appear if there is a connection between the IP Camera and another device. If there is no such connection, the IP Camera factory default Static IP address will not appear on the monitor screen.
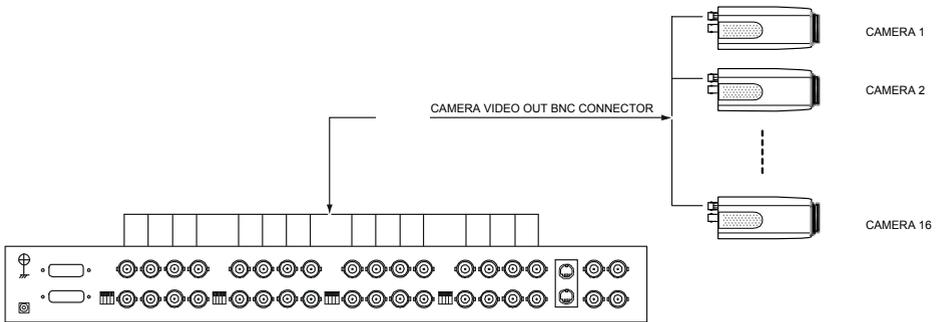
3.1 CONNECTING WITH AN NVR

Use a straight LAN cable to connect directly to an NVR.
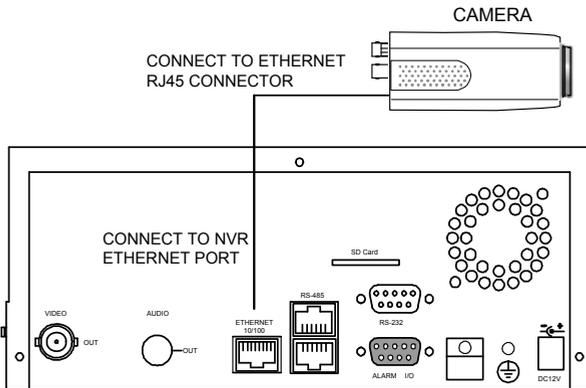
3.2 CONNECTING WITH A DVR
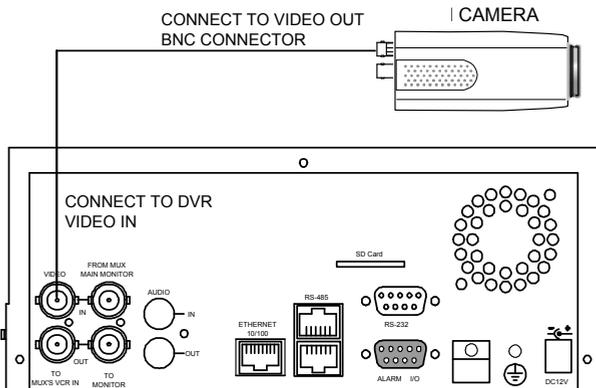
3.3 CONNECTING WITH A MULTIPLEXER

CAMERA VIDEO OUT BNC CONNECTOR

CAMERA 1

CAMERA 2

CAMERA 16

3.4 UPDATING SYSTEM SOFTWARE

If the system software of the IP Camera needs to be upgraded, please take the following steps to safely process it.

Important: Before carrying out the following procedures, please ensure the SD card is working and the file of the system firmware is intact

1. Format an SD card using the FAT16 format if it is unformatted; there are no limitations to an SD card's capacity.
2. Create a directory named LANCAM in the SD card if it does not exist.
3. Copy the file of UPDATE.BIN to the LANCAM-directory.
4. If the IP Camera is running, please power it off first.
5. Insert the SD CARD into the IP Camera.
6. Remove the Ethernet cable from the RJ-45 port and then power on the IP Camera.
7. In 5 to 10 seconds, a message reading "UPDATE PROCESSING" will show up on the screen on a blue background; if not, please check out steps 1 to 6 carefully or else inform your technical support while ignoring the following steps.
8. DO NOT power off the IP Camera while this update process is running until the message "UPDATE OK RESET PLEASE" appears on the screen; it might take 15 to 30 seconds to appear.

9. If the message "UPDATE NG RESET PLEASE" appears rather than "UPDATE OK RESET PLEASE", please write down the error messages shown on the screen and inform your technical support, while ignoring the following steps.

10. Power off the IP Camera when this update process is finished, then remove the SD card from the IP Camera.

11. Reconnect the Ethernet cable to the RJ-45 port if necessary.

12. Power ON the IP Camera and it will work normally if the entire update procedure goes correctly.

13. Verify the version of the system software.

WARNING:

1. **Don't use FAT32 or NTFS or other file formats in step 1.**

2. **Steps 1 to 3 have to be done on a PC.**

3. **Make sure the file of UPDATE.BIN is a correct one in step 3, or the IP Camera will not work normally after being updated.**

4. **If the power of the IP Camera is suddenly lost in step 8, please remove the SD card first and turn on the IP Camera next to test its operation. If the IP Camera remains working normally, please go back to step 4; otherwise, please inform your technical support.**

5. **In step 10, if the SD card is not removed and the IP Camera does not get online as well, the updating process must be repeated again after rebooting the IP Camera.**

6. **Make sure that the SD card is inserted in a correct position in step 5, or the IP Camera will suffer permanent physical damage.**

7. **If the message "CSUM ERROR" appears in step 8, it implies a problem in the file of UPDATE.BIN.**

8. **Don't interrupt the process while the unit is updating itself; proceed with an SD card not including any system software of the unit, or else the unit will crash.**

3.5 IP Camera SD card Troubleshooting

1. Check if the SD card position is correct or not. Please refer to the manual for the related information.

2. After powering the IP Camera on, correctly insert the SD card, and a little icon of "SD" will show up in the upper-right corner of the monitor screen. If not, it means the device detection has failed. Please contact your technical support and ignore the following steps.

3. If no cross sign appears beside the "SD" icon, please go on to the next step. If a cross sign appears, please check the following:

    a. Is it really an SD "Memory" Card?

    b. Is this SD card formatted in the FAT16 format?

    c. Connect the SD card with a PC and test to see whether the PC can read the data or not.

    d. Does this SD card still have the capacity for storing data?

    e. Is the SD card set to write?

If all the answers are "yes" but the cross sign still persists, please contact your technical support and ignore the following steps.

4. Please make sure the function of "SD CARD ENABLE" is activated in the ALARM and SCHEDULE pages if no cross sign appears beside the "SD" icon on the screen.

5. After recording, read the data on the web page of "sdget.htm". If the data cannot be read through the network, please read it instead in a PC, check the data stored in the "LANCAM" directory and contact your technical support regardless of whether there is data or not.

WARNING:

1. **Performing this troubleshooting process may need a monitor, a PC, a card reader and some cables.**

2. **If the SD card is removed while storing or accessing data, the data will be lost.**

3. **If there is a cross sign beside the "SD" icon, it means the SD card has been inserted into the IP Camera but cannot perform its writing function. Possible reasons are:**

    a. It is not an SD memory card.

    b. The SD card is unformatted or formatted in a non-FAT16 or non-FAT12 format.

    c. The file system is damaged.

    d. The capacity of the SD card is full.

    e. The SD card is set to be read only.

4. **Turn off the power before inserting the SD card. Otherwise the unit may shut down.**

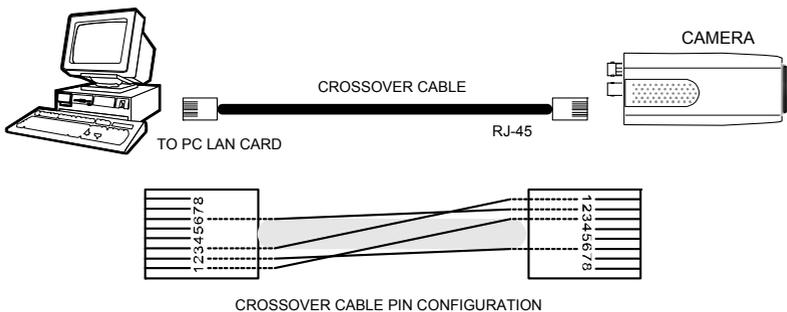# 4. Network Configuration

4.1 Cable Connections

Please follow the instructions below to connect your IP Camera to a computer or a network and to choose a proper RJ-45 cable configuration for connections.

Physical specifications of the RJ-45 cable for Ethernet

Wire Type	Cat. 5
Connector Type	RJ-45
Max. Cable Length	100 m
Hub Wiring Configuration	Straight Through or Cross Over
PC Wiring Configuration	Straight Through or Cross Over

4.1.1 Connect to a computer

Use a straight LAN cable to connect directly to a computer.

CROSSOVER CABLE PIN CONFIGURATION

4.1.2 Connect to a LAN Hub (INTRANET)

The RJ-45 PIN configuration for connecting with a LAN Hub is shown below.
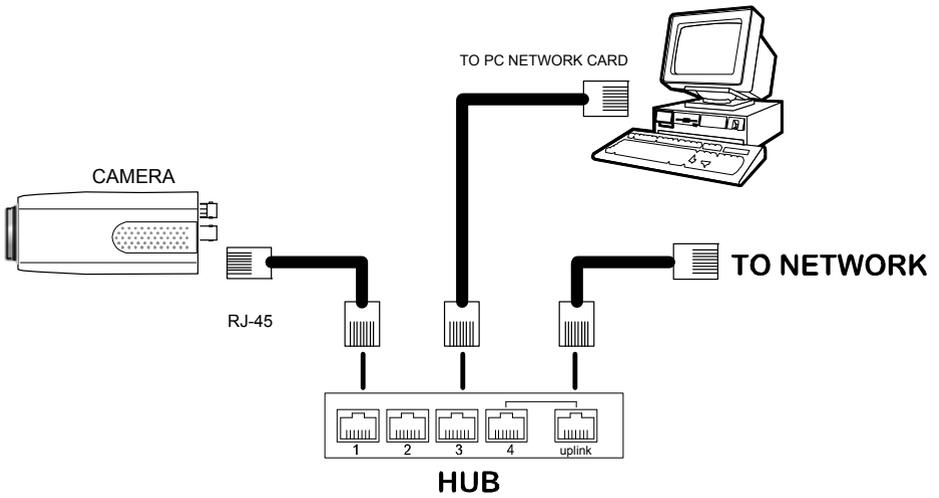
4.2 Configure Your IP Camera Network Settings

Upon connecting with the network hardware, you need to activate the network function and configure the proper network settings of the IP Camera.

4.2.1 Enable DHCP Function

This function can only work if the LAN, which the unit is connected to, has a DHCP server. If the DHCP server is working, please move the dip switch points up to **3** on the flank panel; now the IP Camera will obtain an IP address automatically from the DHCP server. In that case, please skip section 4.2.2 (Set IP address) and follow section 4.3 (TCP/IP Communication Software).

4.2.2 Set IP Address

You need to set an IP address for the unit if the LAN unit isn't connected to a DHCP server. Otherwise, please follow the instructions given below:

Set the **IP**, **MASK** and **GATEWAY**. The following is a sample setting.

IP: 192.168.1.X

MASK: 255.255.255.0

GATEWAY: 0.0.0.0

NOTE: When only one unit of the IP Camera is connected to a computer or LAN, you can freely assign an IP address for the IP Camera. For example, there is a range of IP Camera IP addresses from 192.168.1.1 to 192.168.1.255. You can pick one for use from the range of the IP. It's not necessary to set MASK and GATEWAY; leave the settings as default.
When an IP Camera is connected to a WAN, you must acquire a unique, permanent IP address and correctly configure the MASK and GATEWAY settings according to your network architecture. If you have any questions regarding those settings, please consult a qualified MIS professional or your ISP.

**NOTE:** When connecting to a network, each connected IP Camera must be assigned a unique IP, which must be in the same class type as your network address. IP addresses are written as four sets of numbers separated by periods; for example, 192.168.1.1 Therefore, if the connected network is identified as Class C, for example, the first three sets of numbers of the IP Camera's IP address must be the same as the network address. If the connected network is identified as Class B, the first two sets of numbers of the IP Camera's IP address must be the same as the network address. If you have any questions regarding these settings, please consult a qualified MIS professional or your ISP.

4.3 TCP/IP Communication Software

Follow the procedure below to install the TCP/IP communication program in your computer.

Click the **Start** menu from your computer, and point to the **Settings/Control Panel.**
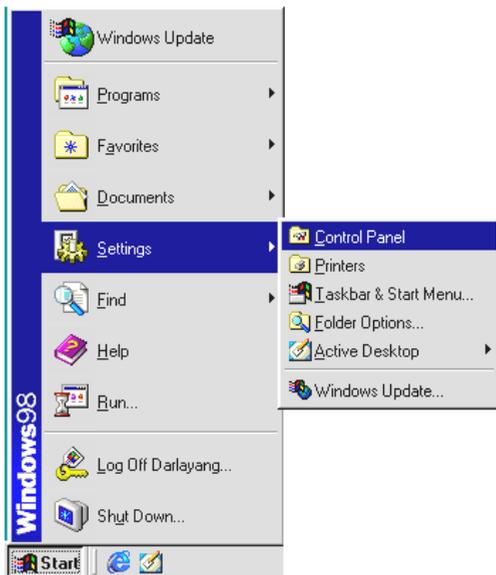
Double click the **Network** icon to enter the windows.

20
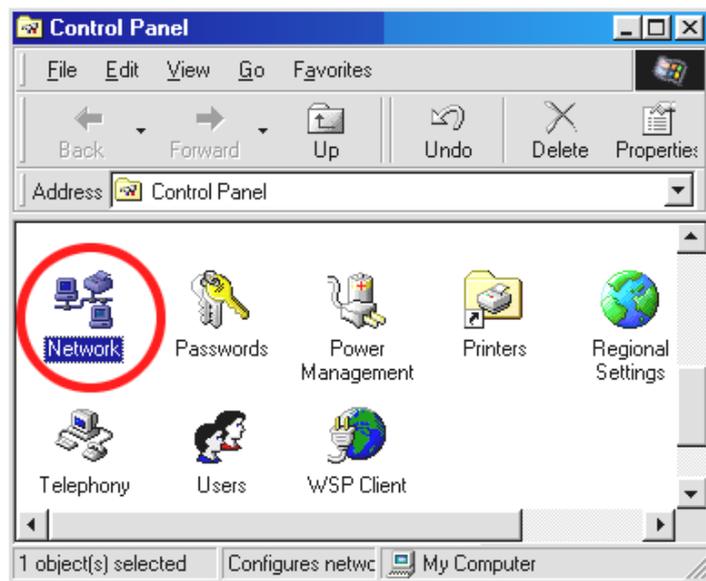
Click the **Configuration** tag, and check if the TCP/IP is included among the network components list. If the TCP/IP is included, please process section 4.5. If it is not included, please follow section 4.4 to install the TCP/IP.
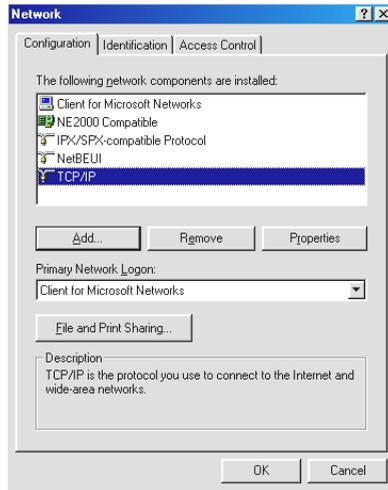
4.4 TCP/IP Installation
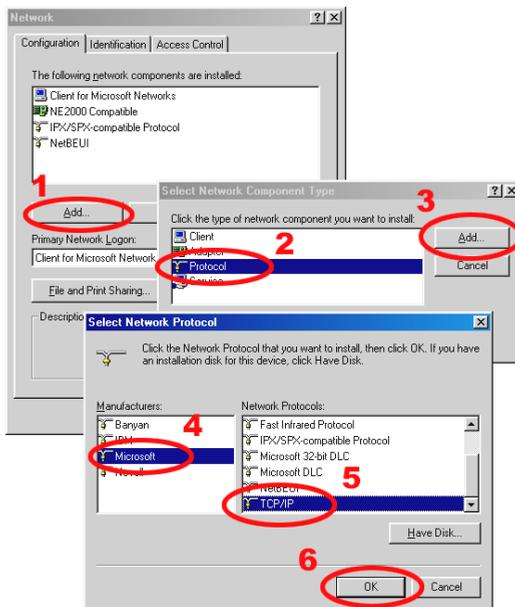
During the installation, you will be requested to insert the Windows CD-ROM. After installation, the PC may be restarted.

4.5 TCP/IP configuration setting

Click Start → Settings → Control Panel → Network**.**

Select TCP/IP**, and then click** Properties**.**

Before processing the IP Camera installation in a WAN, please make sure the Internet

connection works properly. If not, please contact your ISP provider.
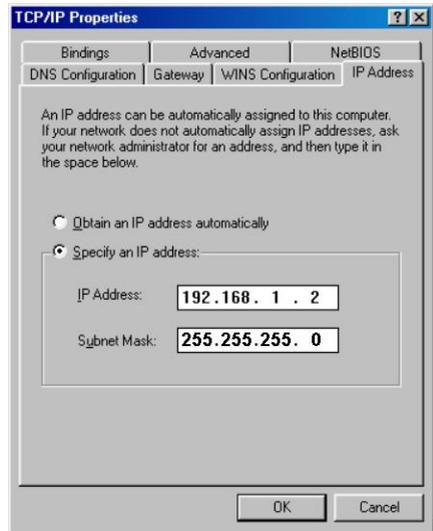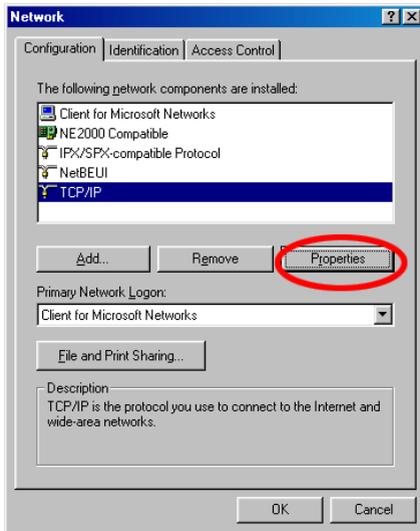
If you are using a DHCP server, please select **Obtain an IP address automatically**. Any

assigned IP address for the connected IP Cameras must be in the same class type as the server.

If there is no DHCP server, please select **specify an IP address** and type in the IP address of

your PC. This IP address must be different from other network IP devices but in the same class

type.

NOTE: The IP address of an IP Camera in a network must be unique to itself as opposed

to those of the other chosen PCs, but in the same class type.

4.6 Connection Testing

With the previous settings, follow the instructions below to ensure whether you have established

the connection successfully.

Click **Start → Programs → MS-DOS Prompt**
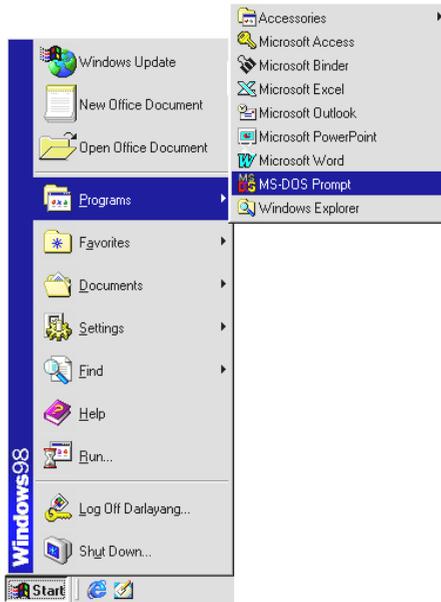
Type in **ping 192.168.1.168,** then enter. (See the sample screen below).

** *This IP is the IP Camera's IP address that is assigned for the connected IP Camera in step2.*
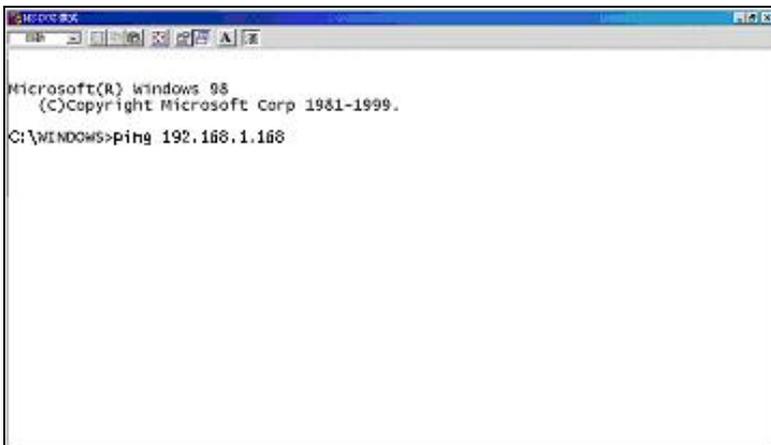
If you receive a response as in the sample screen below, the connection hasn't been successfully established. Please re-check all the hardware and software installations by repeating steps 1 to 5. If you still can't establish the connection after rechecking, please contact your dealer.
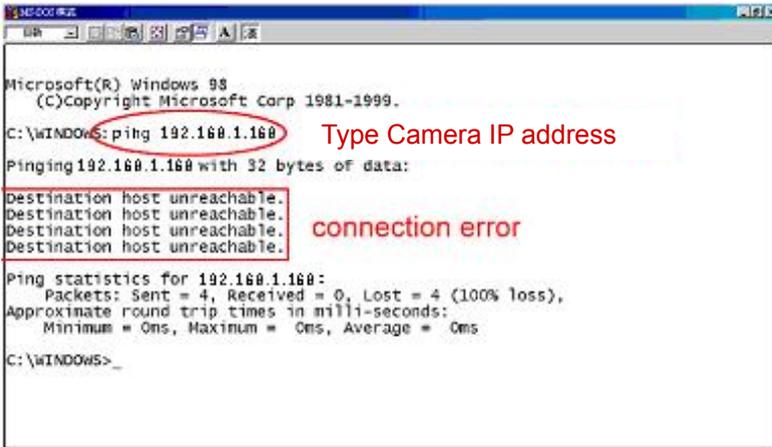
If you receive a response as in the sample screen below, you have successfully made the connection.
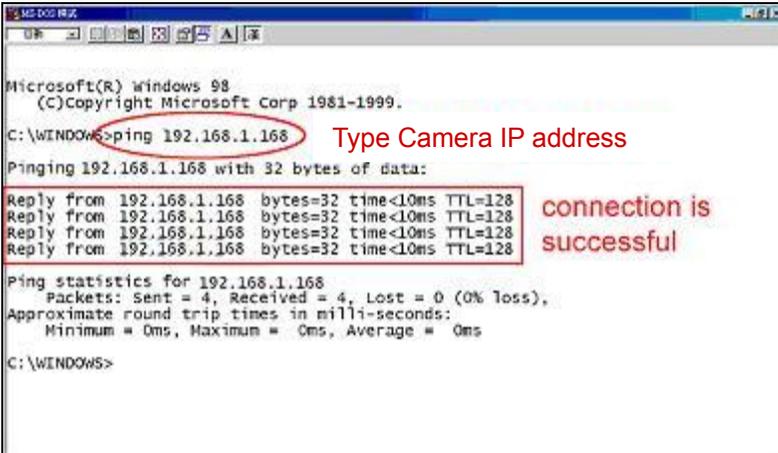
## 5. Operating Instructions for Image Software and Network

Two choices of software are available for linking with the IP Camera: (1) the Microsoft Internet Explorer; and (2) the IP Camera VIEWER, a network browser in a PC which provides the functions of monitoring remote zones or watching recorded data through the TCP/IP protocol. The details are listed as follows.

RJ-45 PIN configuration for Ethernet

PIN NO.	PIN Assignment
1.	TX +
2.	TX -
3.	RX +
4.	Not Connected
5.	Not Connected
6.	RX -
7.	Not Connected
8.	Not Connected

RJ-45 socket

1 2 3 4 5 6 7 8
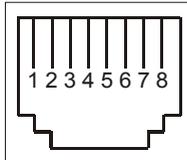
Physical specification for Ethernet

Wire type	Cat. 5
Connector type	RJ-45
Max. cable length	100 m
Hub wiring configuration	Straight Through or Cross Over
PC wiring configuration	Straight Through or Cross Over

5.1 Microsoft Internet Explorer

5.1.1 Connecting the IP Camera

1. Start up the Microsoft Internet Explorer, and then follow the steps below to connect the IP Camera.
2. Click the URL block at the top of the window.
3. Enter the URL address of the IP Camera into the URL block and press the "**Enter**" button to enter the home page.
4. Scroll to the bottom of the page, with its six icons, "Image", "Network", "System", "Application", "SD card" and "Pan/Tilt". Whichever you click, the page headlined "Enter Network Password" will appear.
5. Type in the "User Name" and "Password" in the appropriate spaces.
6. Click the "**OK**" button to set your entries, and automatically exit the page.

NOTE: The default "User Name" and "Password" are admin and 9999 respectively.

NOTE: The page headlined "Enter Network Password" is shown below. Please enter the user name and password of the IP Camera when you see it. If either the user name or the password is incorrect, please check the input data and rectify it if necessary.

NOTE: Once authorized successfully, it will not appear again until you close the window and reconnect it.

NOTE: The initial sequence of proceeding is to type in your IP address and click the "**Enter**" button to access the home page. If and when you revise or change data in the "**SYSTEM USERS**" page, the sequence will alter to initially show the "**Enter Network Password**" page.
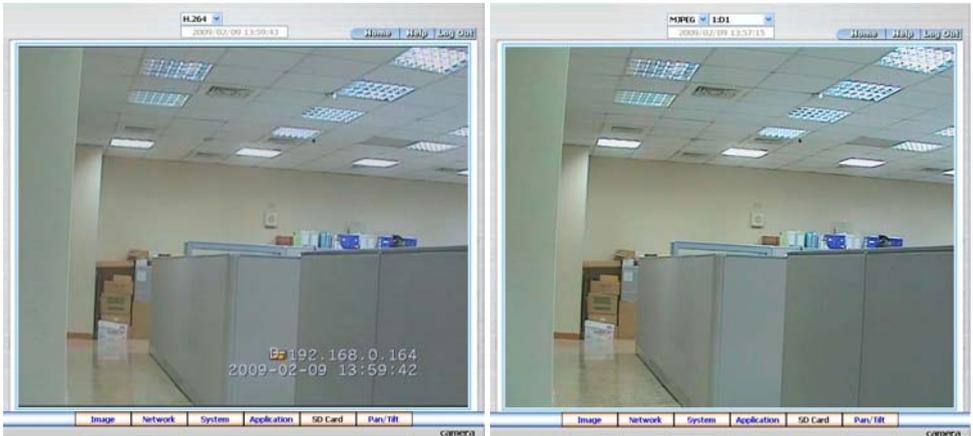
Browsing images from the IP Camera

The images from the IP Camera will be displayed on the home page while going online with the IP Camera. Some buttons of the home page are provided for further setting. In MJPEG mode or in H.264 mode, there are different display formats of its home page. Scroll to choose the image mode from "H.264" or "MJPEG".

Homepage of H.264 mode   Homepage of MJPEG mode

- Click the **Image** button to enter the image-setting page.
- Click the **Network** button to enter the network-setting page.
- Click the **System** button to enter the system-setting page.
- Click the **Application** button to enter the application-setting page.
- Click the **SD card** button to open the SD card- FILELIST of the MEMORY CARD window, if the SD card is inserted.
- Click the **Pan/Tilt** button to change the Pan/Tilt/Zoom settings.
- Click the MJPEG ⌄ 1:D1 ⌄ to change the six pairs of resolution and quality which you already arranged in the "Multi Profile" setting page (MJPEG mode only).
 **NOTE:** The maximum video capture resolution of **CIF** for PAL is 352x288 pixels. The maximum video capture resolution of **HALF D1** is 720 x 288 pixels. The maximum video capture resolution of **D1** is 720 x 576 pixels.
- Click the 11/10/2005 14:31:37 button to change the time/date display mode.
- Click the 🔊 button to play the live audio. Click once again to deactivate.
- **Digital zoom** function: Click the left mouse button on the video display area, and it will show the zoom-in images. Double click the left mouse button to see the maximum size. Click the right mouse button on the video display area, and it will show the zoom-out images. Double click the right mouse button to come back to the normal size.

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5.1.2 Change Image Setting

Please follow the steps below to change the image setting through the network if necessary.

1. Click the **Image** button on the home page to enter the image-setting page.
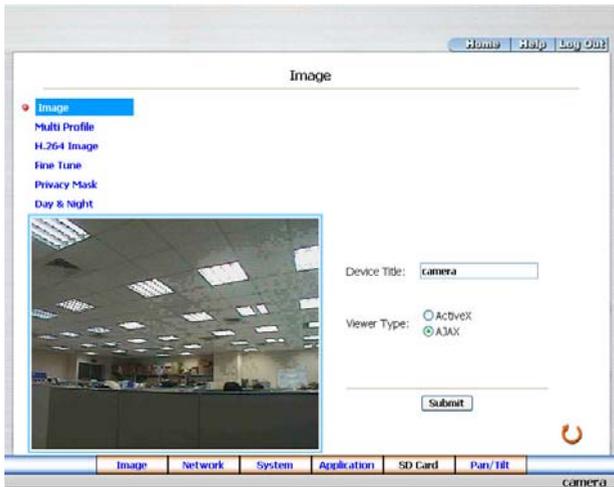
2. Adjust the image setting including "Device Title" and "Viewer Type" if necessary.

3. Click the **Submit** button to submit the new image setting.

4. Click the **Multi Profile** button to enter the MultiProfile image-setting page. Select an ID (1-6)

   from the drop-down list then set its resolution and quality. Click the **Submit** button. Then you

   can exchange the pairs of resolution and quality directly in the Home page.
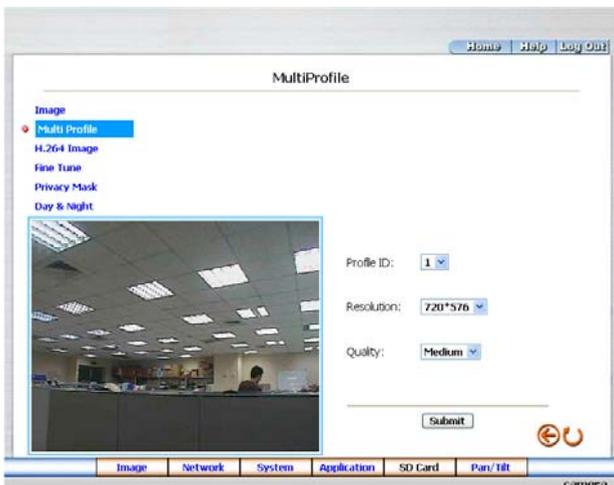
5. Click the **H.264 Image** button to enter the H.264 image-setting page. Adjust the image setting including "Resolution", "Quality" and "Frame Rate" if necessary.
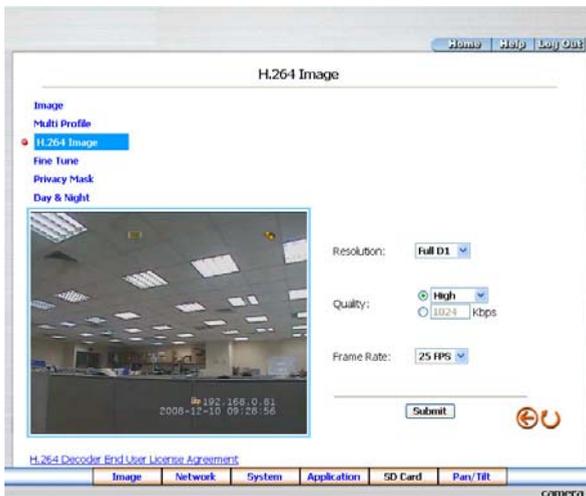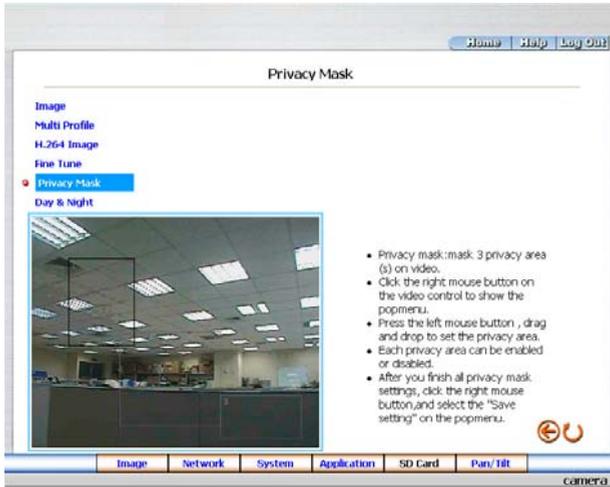

6. Click the **Submit** button to submit the new image setting.
7. Click the **Fine Tune** button to enter the Image Fine Tune page to set the details of the device including: "White Balance", "Flickerless", "Mirror", "High Speed Shutter", "BLC Mode", "Backlight", "Brightness", "Contrast", "Saturation", "Sharpness" and "videoalc". Click the **Default** button to reset all the settings.
   **NOTE: The revised image will appear immediately after any change in made.**
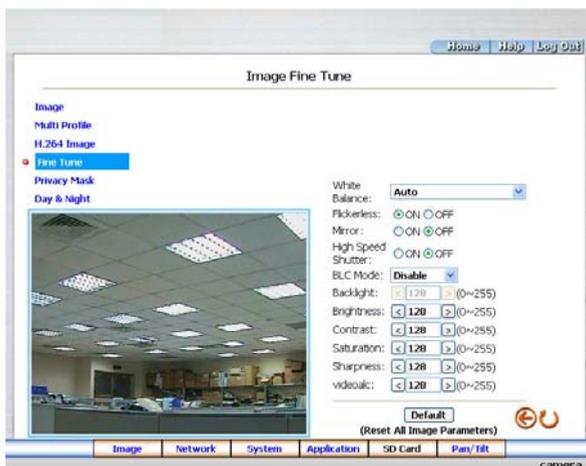
NOTE: The "videoalc" function only activates in connecting the auto iris lens (**DC IRIS**). Please refer to the pin assignment marked on the camera when connecting the auto iris lens.

8. Click the **Privacy Mask** button to enter the Privacy Mask page.

9. Click the **Day & Night** button to enter the Day & Night page. Click the drop-down list to choose the Day & Night mode of "Auto", "Day mode", "Night mode" and "Schedule". Set the values of Focus Adjust and Sensitivity. Click the **Submit** button to submit the new Day & Night setting.
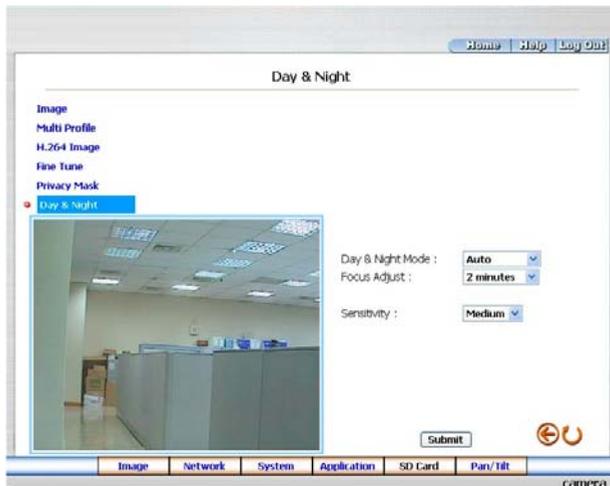
Note:

The Focus Adjust function:

To achieve ideal sharpness and the best focus, every time you reboot the camera, it will automatically switch from color mode to B/W mode. Click the drop-down list to set the period of the focus adjustment from "30 seconds", "1 minute", "2 minutes", "3 minutes", "5 minutes", and "10 minutes", or just select "disable" to deactivate the function.

10. Click the **Home** button to return to the home page while the new image setting acts on the images to effect the desired changes instantly. (If the setting has not been changed by the above steps, any (re)entry onto the home page will find images in their earlier or original setting.)

Description of function keys:

Device Title: Type in the camera title in the given space.

Resolution:

> **MJPEG mode -** Scroll to choose the image resolution from "352 * 240", "720 * 240" or "720 * 480" (NTSC); "352 * 288", "720 * 288" or "720 * 576" (PAL).

> **H.264 mode -** Scroll to choose the image resolution from "Full D1","Half D1" or "CIF".

Quality: Scroll to choose the image quality out of a spectrum of qualities ranging from "Highest", "High", "Medium", and "Low" to "Lowest". In H.264 mode, you can also set the quality by typing in the value. The custom quality value must be in the range between 64 Kbps to 8192 Kbps.

Viewer type: Click to choose the viewer type of the "ActiveX" or "AJAX" mode.

Submit: Click to submit the new image setting to the IP Camera.

Frame rate: Click the drop-down list to choose the frame rates of "5FPS","15FPS", "24FPS" or "25FPS".

Fine Tune mode:

> **White Balance:** Scroll to choose the mode from "Auto", "Fluorescent (3200K)", "Indoor (4200K)", "Outdoor (6500K)", "Push Hold".

> **Flickerless:** Mark the "Flickerless" "ON" or "OFF". Click your choices to enable.

> **Mirror:** Mark the "Mirror" "ON" or "OFF". Click your choices to enable.

> **High Speed Shutter:** Mark the "High Speed Shutter" "ON" or "OFF". Click your choices to enable.

> **BLC Mode:** Scroll to choose from "Disable", "Weighted" or "Fixed Gain".

> **Backlight:** Select in the backlight level in the blank (0 to 255).

> **Brightness:** Select your desired quality of image brightness from a spectrum of 0 to 255.

> **Contrast:** Select the contrast level in the blank (0 to 255).

> **Saturation:** Select the saturation level in the blank (0 to 255).

> **Sharpness:** Select the sharpness level in the blank (0 to 255).

> **Videoalc:** Select in the blank (0 to 255) to adjust the iris for different lighting environments.

> **Default:** Click this button to install the default settings in all the entries for image parameters on this page.

5.1.3 Change the Network Setting

Please follow the steps below to change the network setting through the network if necessary.

● *Set the network options and IP address.*

1. Click the **Network** button in the home page to enter the Network page.

2. The accessible networks here are the "FTP", "SMTP", "SNTP", "DDNS",

   "PPPoE", "UPnP", "IP Filter" and the "Traffic".

3. Fill in the "IP Address", "Netmask", "Default Gateway", "Primary Nameserver", and "HTTP

   Port" if necessary.

4. Click the **Submit** button to submit the new network setting.

5. Click the **Home** button to return to the home page.

Description of function keys:

IP Address: Enter the 4-byte IP Address in the appropriate blank space (the value in each box may be anywhere between 0 and 255). Every IP camera has to own an IP address to be identified on the network.

Netmask: Fill in the 4-byte Subnet Mask in the required blank spaces (usually any numbers between 0 and 255). It is used to identify the subnet where the IP camera is sited.

Default Gateway: Type in the 4-byte Gateway in the relevant blank spaces (each unit value must be between 0 and 255).

Primary Nameserver: Enter the 4-byte DNS Server Address in the blank spaces provided (each value unit must be between 0 and 255). The DNS Server is in charge of translating the Domain Name into the IP Address.

HTTP Port: Indicates the specific HTTP Port Number. The default is 80.

Submit: Click to submit the new network setting to the IP camera.

● *Change the Network Setting — FTP.*

Please follow the steps below to change the FTP setting via the network if necessary to upload recording

data live.

1. Click the **FTP** button at top left to enter the "FTP Server Setting" page.

2. Type in the "FTP Server" address, the "User Name", and the "Password" of the FTP Server; and set
   the "File Upload Path" of the image files when necessary.
3. Click the **Submit** button to submit the new FTP setting of the recording.
4. Click the **Home** button to return to the home page.

Description of function keys:

    FTP IP Address: Enter the FTP server DOMAIN NAME in the appropriate blank space.

    User Name: Fill in the FTP login user name in the attached blank space (if the data is not provided,
                warning messages will show up).

    Password: Type in the FTP login password in the attached blank space (if the space is blank,
        warning messages will show up).

    File Upload Path: Enter the file upload path while setting the FTP.

    Submit: Click to submit the new FTP setting to the IP Camera.

● *Change the Network Setting — SMTP.*

Please follow the steps below to change the SMTP setting through the network if necessary.

1. Click the **SMTP** button at upper left above to enter the "SMTP Server Setting" page.

2. Click "My Server Requires Authentication" to checkmark the attached box and activate the function.

3. Fill in the Sender name, DOMAIN NAME of the SMTP server, and set the recipient's e-mail address if necessary.

4. Click the **Submit** button to submit the new SMTP setting.

5. Click the **Home** button to return to the home page.

Description of function keys:

    Account Name & Password: Fill in the account name and password if you check marked the "My

                Server Requires Authentication" function.

    SMTP Server: Enter the SMTP server DOMAIN NAME in the given blank space.

    Email Address: The recipient's e-mail address.

    Submit: Click to submit the new SMTP setting to the IP Camera.

- *Change the Network Setting — SNTP.*

Please follow the steps below to change the SNTP setting through the network if necessary.

1. Click the **SNTP** button at upper left above to enter the "SNTP Server Setting" page.

2. Enter the IP Address of the SNTP server, and choose one of the time zones as and when necessary.

3. Click "Automatically Adjust for Daylight Saving Time Changes" to checkmark the attached box and activate the function.

4. Click the **Submit** button to submit the new SNTP setting.

5. Click the **Home** button to return to the home page.

Description of function keys:

    SNTP Server: Enter the SNTP server DOMAIN NAME in the blank space provided.

    Time Zone: As we know, the globe is divided into various time zones. The user must enter his/her time zone. If this is not done, the time given by the unit may be incorrect.

    Submit: Click to submit the new SNTP setting to the IP camera.

● *Change the Network Setting — DDNS.*

The "Network" page has, on its upper left, the "DDNS" icon. Please follow the steps below to change the

DDNS setting through the network if necessary.

1. Click the **DDNS** button at upper left above to enter the "DDNS Setting" page.

2. Click "Enable DDNS Function" to checkmark the attached box and activate the function.

3. Click "DDNS Type" to open the list of two DDNS modes to choose from: "DynDNS" and "hn". Click

   the "Apply" button and connect their website automatically and visit it. Type in your dynamic IP

   Address and Email Address. If they are accepted by the website, you will get an Email containing

   your DDNS Account and DDNS Password in your Email box.

4. Type in the "DDNS Host Name", the "DDNS Account" and the "DDNS Password".

5. Click the **Submit** button to submit the new setting.

6. Click the **Home** button to return to the home page.

NOTE: Please refer to section 5.1.8 (PPPoE & DDNS) for more details.

Description of function keys:

Enable DDNS Function: Checkmark to activate the function.

DDNS Type: Click to open the list of two DDNS modes to choose from: "DynDNS" and "hn". Click the "Apply" button and connect this website automatically and enter it. Type in your dynamic IP Address and Email Address. If they are accepted by the website, you will get an Email containing your DDNS Account and DDNS Password in your Email box.

DDNS Host Name: Type in your host name in the attached space.

DDNS Account: Enter it in the given space.

DDNS Password: Enter it in the required space.

Submit: Click to set.

● *Change the Network Setting — PPPoE.*

The "Network" page has, on its upper left, the "PPPoE" icon. Please follow the steps below to change the

PPPoE setting through the network if necessary.

1. Click the **PPPoE** button at upper left above to enter the "PPPoE Setting" page.

2. Please read the "PPPoE Troubleshooting" document first, then press "Close' button.

3. Click the "PPPoE mode" to activate the function.

4. Type in the PPPoE "Account" and the PPPoE "Password".

5. Click the **Submit** button to submit the new setting.

6. Click the **Home** button to return to the home page.

   NOTE: Please refer to section 5.1.8 (PPPoE & DDNS) for more details.

Description of function keys:

PPPoE mode: Click your choices to enable the PPPoE function.

Account: Enter it in the given space.

Password: Enter it in the required space.

Submit: Click to set.

● *Change the Network Setting —UPnP.*

The "Network" page has, on its upper left, the "UPnP" icon. Please follow the steps below to change the

UPnP setting through the network if necessary.

1.   Click the **UPnP** button at upper left above to enter the "Universal Plug and Play" page.

2.   Click "Enable UPnP" to checkmark the attached box and activate the function.

3.   Type in the UPnP "Max Expired Age", the "SSDP Port" and the "UPnP Port".

4.   Click "Enable UPnP Memory Card Access" to checkmark the attached box and activate

the function.

5.   Click the **Submit** button to submit the new setting.

6.   Click the **Home** button to return to the home page.

Description of function keys:

Max Expired Age: Enter it in the given space from a range of 10~3600.

SSDP Port: SSDP stands for Simple Service Discovery Protocol. SSDP searches for upstream Internet

gateways using UDP port 1900.

UPnP Port: Type in the UPnP Port in the attached space.

Submit: Click to set.

● *Change the Network Setting — IP Filter*

The "Network" page has, on its upper left, the "IP Filter" icon. Please follow the steps below to change the

IP Filter setting through the network if necessary.

1. Click the **IP Filter** button at upper left above to enter the "Network Setting" page.
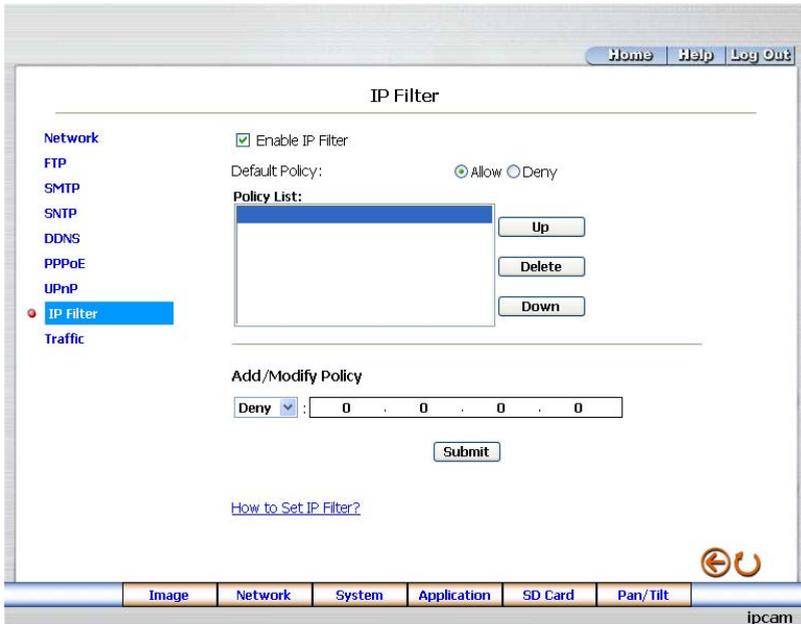
2. Click "Enable IP Filter" to checkmark the attached box and activate the function.

3. Select the Default policy.

4. Set the Allow/Deny IP Filter policy and enter its IP address.

5. After setting the policies, they will be shown on the **Policy List**. The user can use the "**Up**" or

   "**Down**" to select a policy and use the "**Delete**" button to erase it.

6. Click the **Submit** button to submit the new setting.

7. Click the **Home** button to return to the home page.

Note: The settings of the IP Filter must be correct or you may not able to operate the device regularly. In

case of the wrong setting of the IP Filter and you can't access the device normally, please press the

"**Default**" button on the rear panel of the camera for back to the factory default setting.

● *Change the Network Setting —Network Traffic.*

The "Network" page has, on its upper left, the "Traffic" icon. Please follow the steps below to change the

UPnP setting through the network if necessary.

1. Click the **Traffic** button at upper left above to enter the "Network Traffic" page.

2. Type in the "Maximum Upload Bandwidth" and the "Maximum Download Bandwidth".

3. Click the **Submit** button to submit the new setting.

4. Click the **Home** button to return to the home page.

Description of function keys:

Maximum Upload Bandwidth: Enter it in the given space from a range of 0 to 102400.

Maximum Download Bandwidth: Enter it in the required space from a range of 0 to 102400.

Submit: Click to set.

5.1.4 Change the System Setting

Please follow the steps below to change the date and time of the system setting through the network if necessary.

● *Set the Date and Time of the system*

1. Click the **System** button in the home page to enter the "Date And Time" page (default).

2. Choose one of the three modes shown on the page to set the Date and Time of the system. The three modes are "Set Manually", "Synchronize With Computer Time", and "Synchronize With SNTP Server".
3. Click the **Submit** button to submit the new Date and Time settings.
4. Click the **Home** button to return to the home page.

Description of function keys:

    The Local Time: Shows the current date and time of the IP Camera.

    Set Manually: Manually sets the date and time of the IP Camera.

    Synchronize With Computer Time: Synchronizes with the linking computer.

    Synchronize With SNTP Server: Synchronizes with the SNTP server. In this mode, two choices of adjusting are provided: doing it manually or setting the frequency to enable the system to do it automatically.

    Submit: Click to submit the new setting to the IP Camera.

● *Change the System Setting — Timestamp.*

Please follow the steps below to change/add the timestamp through the network if necessary.

1. Click the **Timestamp** button on the left side of the "System - Date and Time" page to enter the "Timestamp" page.
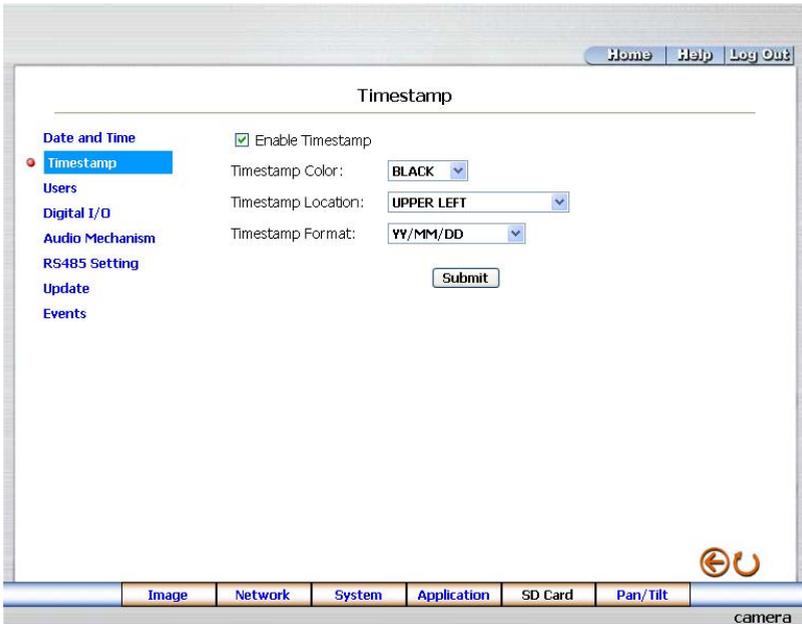
2.   Click "**Enable Timestamp**" to checkmark the attached box and activate the function
3.   Add or modify any timestamp's data if necessary.
4.   Enter the "Timestamp Color" you have chosen.
5.   Enter the "Timestamp Location" you have chosen.
6.   Enter the "Timestamp Format" you have chosen.
7.   Click the **Submit** button to submit the new user's setting.
8.   Click the **Home** button to return to the home page.

Description of function keys:

Enable Timestamp: Checkmark to activate the function.

Timestamp Color: Click to open the list of eight color modes to choose from: "BLACK", "WHITE", "RED", "ORANGE", "YELLOW", "GREEN", "BLUE", and "PURPLE".

Timestamp Location: Click to open the list of four location modes to choose from: "UPPER LEFT", "UPPER RIGHT", "BOTTOM LEFT", "BOTTOM RIGHT", "ANALOG UPPER LEFT", "ANALOG UPPER RIGHT", "ANALOG BOTTOM LEFT" and "ANALOG BOTTOM RIGHT".

Timestamp Format: Click to open the list of six format modes to choose from: "YY/MM/DD", "MM/DD/YY", "DD/MM/YY", "YY/MM/DD TITLE", "MM/DD/YY TITLE", and "DD/MM/YY TITLE".

Submit: Click to set.

● *Change the System Setting — Users.*

Please follow the steps below to change/add the users' authority through the network if necessary.

1. Click the **Users** button on the left side of the "Date and Time" page to enter the "Users" page.

2. Add, modify or delete any user's data if necessary.
3. Click the **Submit** button to submit the new user's settings.
4. Click the **Home** button to return to the home page.

Description of function keys:

User List: The list shows the registered user(s) and the corresponding authority.

Delete: Deletes a selected user.

Name: Enter the user's name, which will be added or modified.

Password: Enter the new password of the user's name above.

Confirm: Type in the password again for verification.

Authority: Choose an authority option of the user's name from: Admin, Operator, and Viewer.

Submit: Click to submit the new setting to the IP Camera.

● *Change the System Setting — Digital I/O.*

Please follow the steps below to change the Digital I/O through the network if necessary.

1. Click the **Digital I/O** button on the left side of the "Date and Time" page to enter the "Digital I/O

    Setting" page.
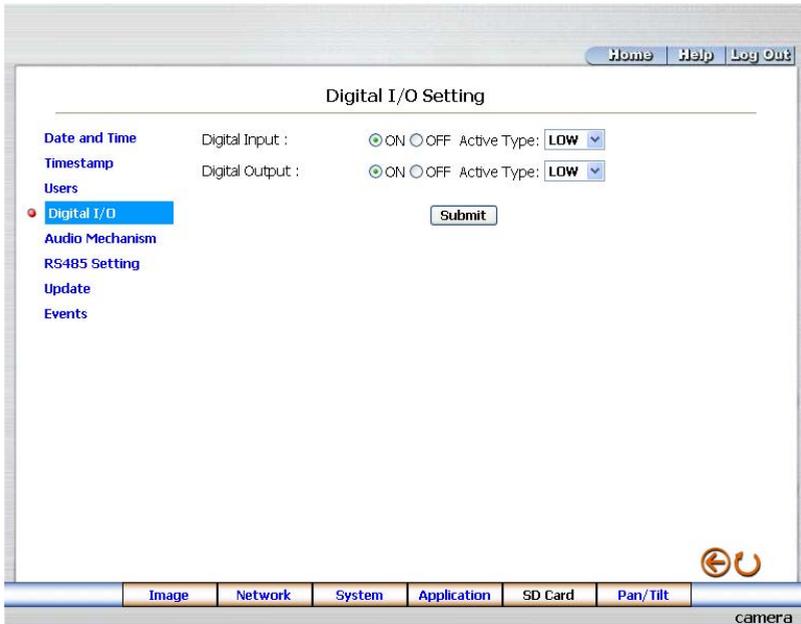
2. Mark the "Digital Input" "ON" or "OFF" and the "Digital Output" "ON" or "OFF". Click your choices to

    enable.

3. Click the **Submit** button to submit the new user's settings.

4. Click the **Home** button to return to the home page.

Description of function keys:

Digital Input: Select "ON" or "OFF" to use the GPIO connector or shut it down.

Digital Output: Select "ON" or "OFF" to use the GPIO connector or deactivate it.

- *Change the System Setting — Audio Mechanism.*

Please follow the steps below to change the Audio Mechanism through the network if necessary.

1. Click the **Audio Mechanism** button on the left side of the "Date and Time" page to enter the "Audio Mechanism Setting" page.
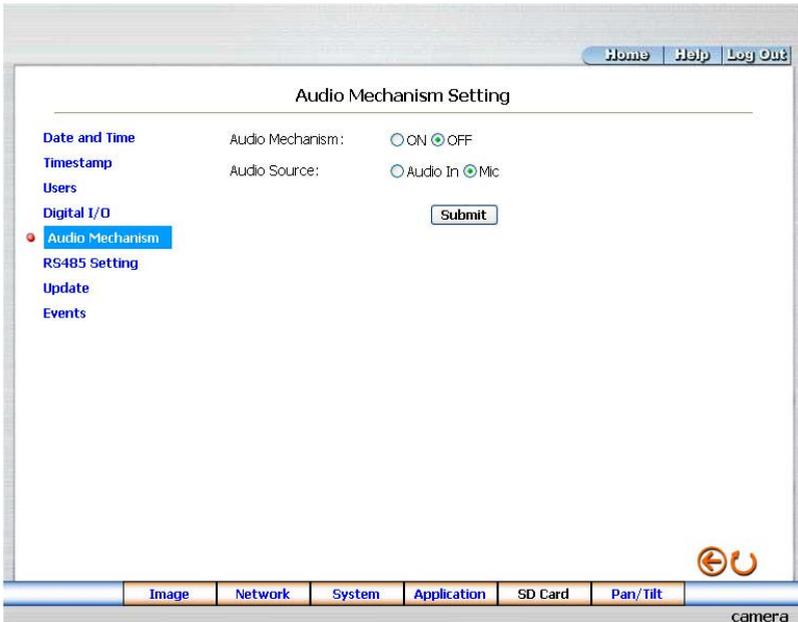
2. Mark the "Audio Mechanism" "ON" or "OFF".

3. Choose one of the audio sources. The two sources are "Audio In" and "Mic" (microphone).

4. Click the **Submit** button to submit the new user's settings.

5. Click the **Home** button to return to the home page.

> **NOTE**: **This setting is for turning the audio mechanism of the Camera on/off automatically.**
>
> **The Live audio service is only provided in the H.264 mode via the Web browser.**

Description of function keys:

Audio Mechanism: Select "ON" or "OFF" to activate or deactivate the function.

Audio Source: Select "Audio In" or "Mic" (microphone) from the audio sources.

● *Change the System Setting — RS485 Setting.*

Click the **RS485 Setting** button on the left side of the "Date and Time" page to enter the "RS485 Setting" page.

Description of function keys:

Baud rate: Eight different speeds can be used: 2400 baud per second, 4800 baud, 9600 baud,

19200 baud, 28800 baud, 38400 baud, 57600 baud and 115200 baud.

Type: Choose one of the types.

Device ID: You have the option of using an ID code (any number between **1** and **255**).

Raw Format: Set to transmit the ASCII codes.

Canonical Format: Set to transmit the character string.

● *Change the System Setting — Update Firmware.*

Please follow the steps below to change the Audio Mechanism through the network if necessary.

1.   Click the **Update Firmware** button on the left side of the "Date and Time" page to enter the

    "Update Firmware" page.
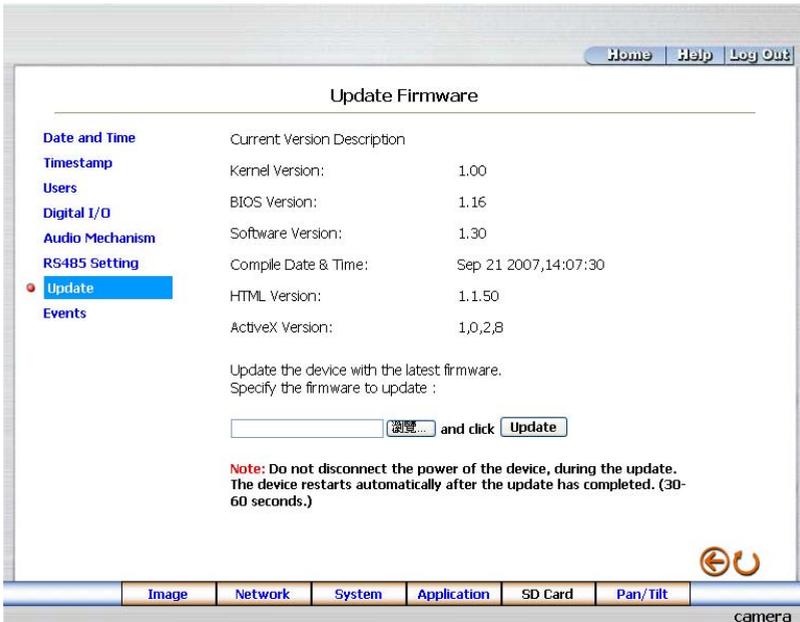
2.   Click the "Browse…" button to select the UPDATE.BIN file which was copied into your computer.

3.   Click the "Update" button.

4.   DO NOT power off the IP Camera while this update process is running.

Note: Don't interrupt the process while the unit is updating itself.

Note: Please make sure that the UPDATE.BIN file is fit in with the model of the unit. Updating

    with the wrong UPDATE.BIN file may cause any physical damage to the device.

Note: The Temporary Internet Files (or cache) folder contains Web page content that is stored on your

    hard disk for quick viewing. We suggest deleting the Temporary Internet Files immediately after

    updating the firmware. To delete the files in the Temporary Internet Files folder, follow these steps:

    1. Quit Internet Explorer and quit any instances of Windows Explorer.

    2. Click **Start**, click **Control Panel**, and then double-click **Internet Options**.

    3. On the **General** tab, click **Delete Files** under **Temporary Internet Files**.

    4. In the **Delete Files** dialog box, click to select the **Delete all offline content** check box, and
        then click **OK**.

    5. Click **OK**.

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● *View the Event Logs.*

Please follow the steps below to view events through the network if necessary.

1. Click the **Events** button on the upper left above to enter the "Event Log" page.
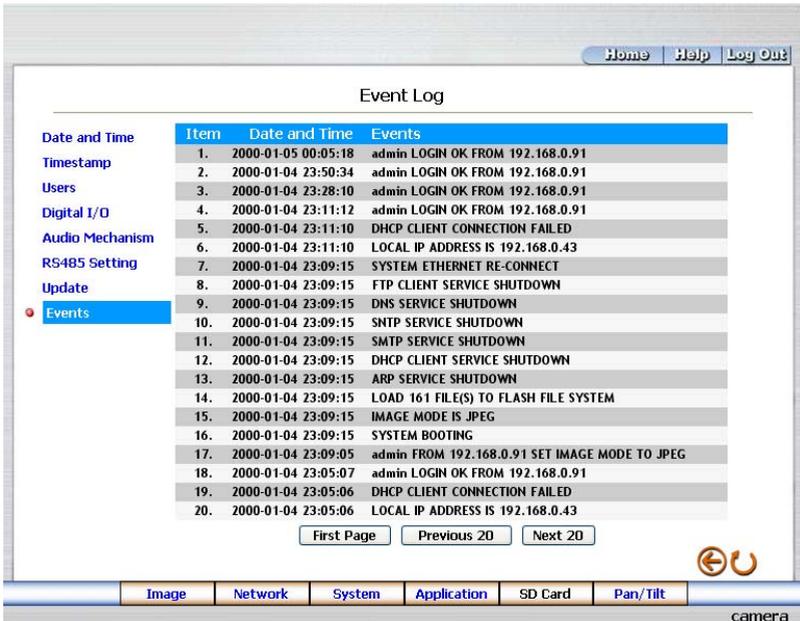
2. Choose one of the three buttons shown on the page to view an event when necessary. The three

    buttons are titled "First Page", "Previous 20", and "Next 20".

Description of function keys:

First Page: Displays the first page.

Previous 20: Displays the previous 20 pages.

Next 20: Displays the next 20 pages.

5.1.5 Change the Application Setting

Please follow the steps below to change the application setting through the network if necessary.

- *Change the Application Setting — FTP Application Setting.*

Please follow the steps below to change the FTP setting via the network if necessary to upload recording

data live.

1. Click the **Application** button on the home page to enter the "FTP Application Setting" page

    (default).

2. For the storage setting, type in the required number of images you wish to set in "Pre - Alarm

    Memory Buffer" and "Alarm Memory Buffer respectively" in their corresponding blank spaces.

3. Enter the "Upload Rate" you have chosen.

4. Click "Submit" after each of the above entries for their settings.

5. Click the "Home" button to return to the home page.

Description of function keys:

Pre – Alarm Memory Buffer: Fixes the desired number of images to prelude an alarm.

Alarm Memory Buffer: Determines the selected length of the image buffer after an alarm.

Upload Rates: Sets the upload speed rate.

● *Change the Application Setting — SD Card Application Setting.*

Please follow the steps below to change the SD CARD setting via the network if necessary to upload recording data live.

1. Click the **SD Card** button on the top left to enter the "SD Card Application Setting" page.

2. You have an option as to which SD - card storage format to use, the MJPEG or the AVI. Click your selected format and click "Submit" to set it.

3. If it's MJPEG you want, fill in the "Max MJPEG Numbers" entry.

4. If AVI is your choice, enter its recording rate and duration in seconds, and click "Submit" for their setting.

Description of function keys:

MJPEG Format: One image per file.

Max MJPEG Numbers: Sets the number of file sequences you can save per second.

AVI Format audio setting: Unlike a single – image file, this option offers a selected section of a video record.

Recording Rate: Sets your chosen frame rate of frames per second.

AVI Duration: Predetermines the length of each video file in terms of seconds.

Enable SD Card Rewrite: Tick to activate the SD card rewrite function.

SD Card Capacity: The free capacity of the SD card.

SD Card Usage: The percentage of the recorded file on the SD card.

SD Format : Click and press the Yes button to format the SD card.

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● *Change the Application Setting —SMTP Application Setting.*

Please follow the steps below to change the SMTP setting via the network if necessary.

1. Click the **SMTP** button on the left side to enter the "SMTP Application Setting" page.
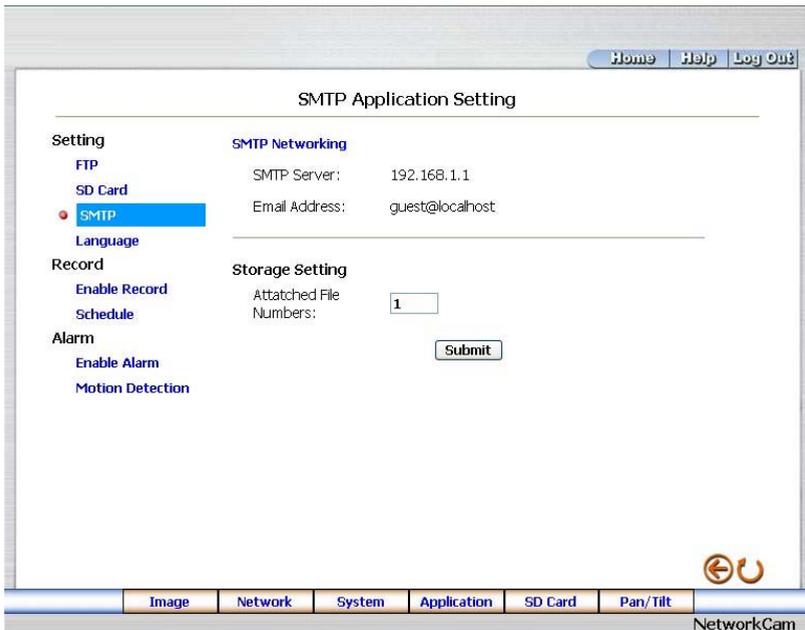
2. Enter the attached file number as and when necessary. The maximum number which can be

   used is 8.

3. Click the **Submit** button to submit the new SMTP setting of the recording.

4. Click the **Home** button to return to the home page.

Description of function keys:

File numbers: Sets the quantity of images per Email.

● *Change the Application Setting —Language Setting.*

Please follow the steps below to change the Language setting via the network if necessary.

1. Click the **Language** button on the left side to enter the "Language Setting" page.
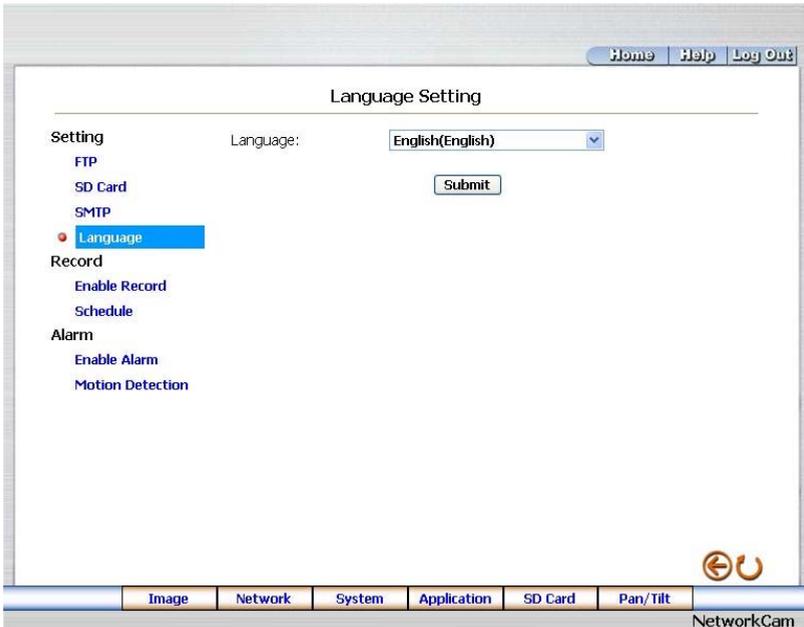
2. You have an option as to which language to use. The default is "English"

3. Click your selected language and click "Submit" to set it.

● *Change the Application Setting —Record Application Enable Setting.*

Please follow the steps below to change the setting via the network if necessary.

1. Click the **Enable Record** button on the left side of the record to enter the "Record Application Enable Setting" page.
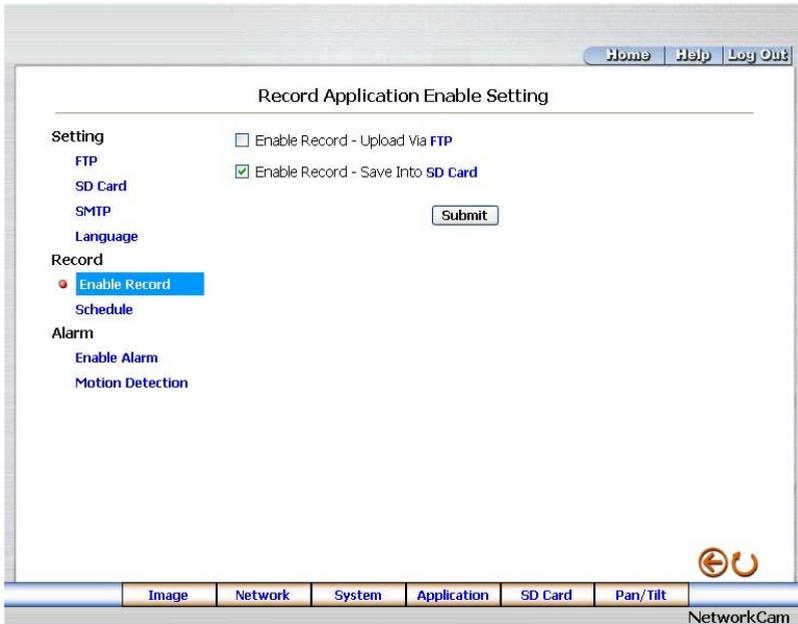
2. Click "Enable Record – UPLOAD Via FTP" to checkmark the attached box and activate the function.

3. Click "Enable Record – Save Into SD card" to checkmark the attached box and activate the function.

4. Click the **Submit** button to submit the new setting of the recording.

5. Click the **Home** button to return to the home page.

**Description of function keys:**

Enable Record – Upload Via FTP: Activates or deactivates the recording to the FTP server.

Enable Record – Save Into SD Card: Activates or deactivates the recording to the SD card.

- *Change the Application Setting —Record - Schedule.*

1. Click the **Application** button on the home page to enter the "Schedule" page.
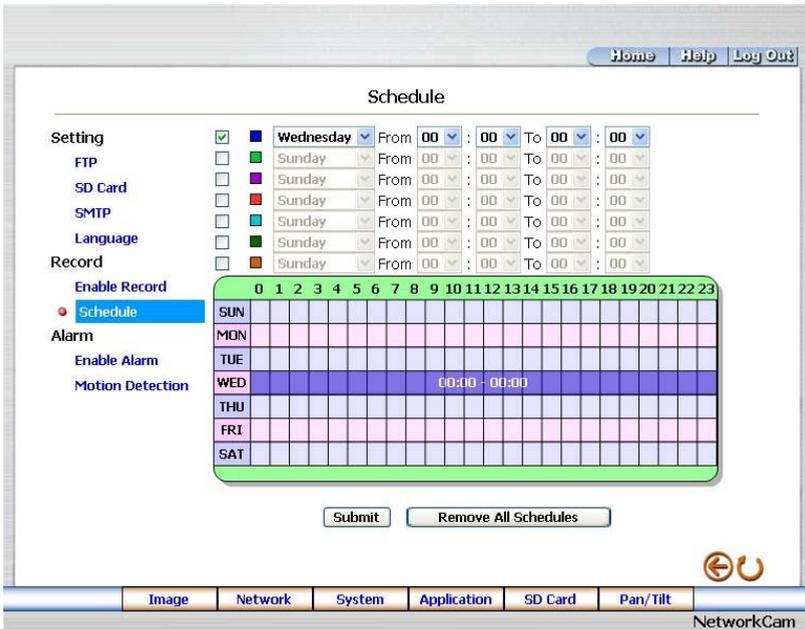
2. Check/uncheck any/all of the first seven boxes set vertically in the upper half of the "Schedule" page to enable/disable the programmed recording function, and vary the setting of the targeted item while it is enabled.

3. Click the **Submit** button to submit the new schedule setting.

4. Click the **Remove All Schedules** button to clear out all the data of the schedule setting.

Description of function keys:

    Schedule: Check / uncheck the first seven boxes in a vertical row on the left to enable/disable the programmed scheduled recording function if necessary. Vary any of the schedules of the recording setting if necessary (please refer to the above description).

    Chart: Schedule list.

    Submit: Click to submit the new setting to the IP Camera.

    Remove All Schedules: Click to clear out all the data of the schedule setting.

- *Change the Application Setting — Alarm Application Enable Setting.*

Please follow the steps below to change the setting via the network if necessary.

1. Click the **Enable Alarm** button on the left side of the record to enter the "Alarm Application Enable Setting" page.

2. Click "Enable Alarm – Trigger an Alarm When Ethernet Is Lost" to checkmark the attached box and activate the function.
3. Click "Enable Alarm – Upload Via FTP" to checkmark the attached box and activate the function.
4. Click "Enable Alarm – Save Into SD card" to checkmark the attached box and activate the function.
5. Click "Enable Alarm – Upload Via SMTP" to checkmark the attached box and activate the function.
6. Enter the "Alarm Duration" you have chosen.
7. Click the **Submit** button to submit the new setting of the recording.
8. Click the **Home** button to return to the home page.

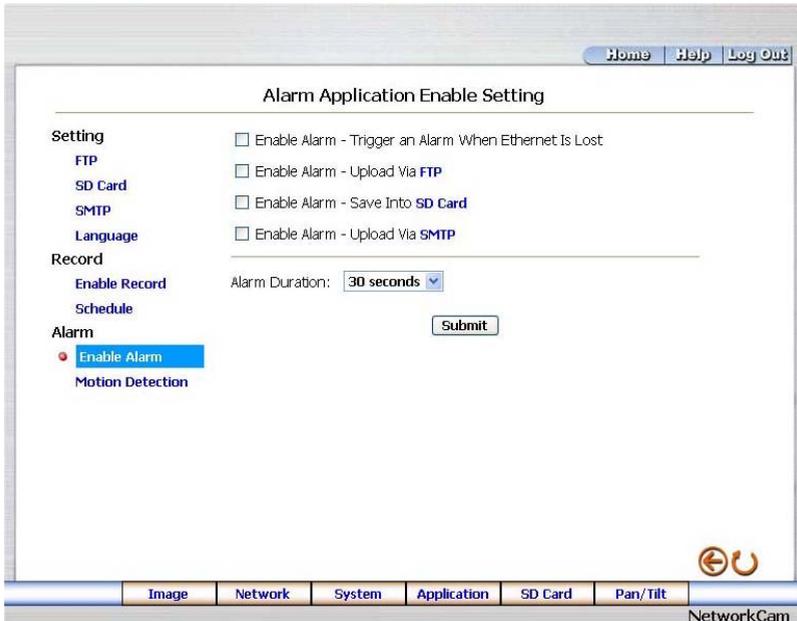**Description of function keys:**

Enable ALARM – Trigger an Alarm When Ethernet Is Lost: Activates or deactivates the alarm triggering while the Ethernet lost.

Enable Alarm – Upload Via FTP: Activates or deactivates the alarm recording upload to the FTP.

Enable Alarm – Save Into SD card: Activates or deactivates the alarm recording to be saved to the SD card.

Enable Alarm – Upload Via SMTP: Activates or deactivates the alarm recording upload to the SMTP.
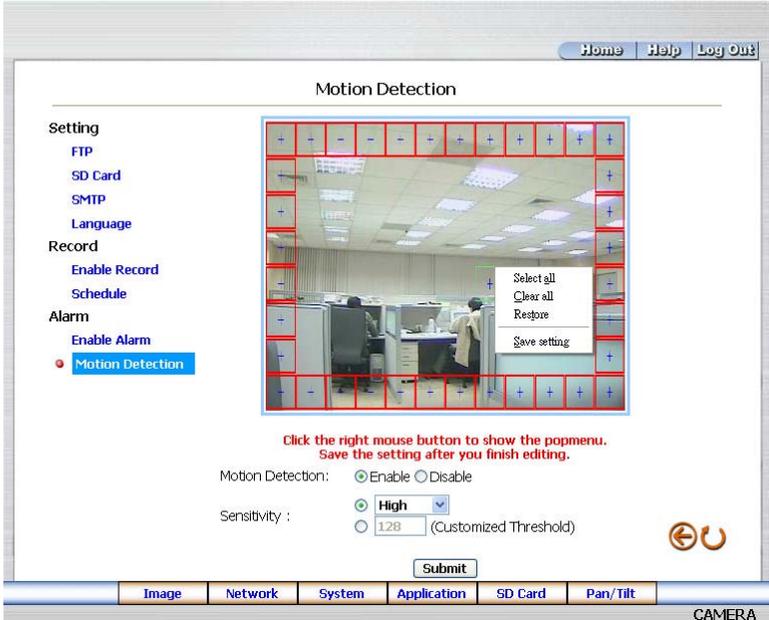
Alarm Duration: Predetermines the length of the alarm.

● *Change the Application Setting —Motion Detection.*

Please follow the steps below to enable changes in the motion detection function of the alarm through the network if necessary.

Set the motion detection:

1. Click the **Motion Detection** button on the left side of the Alarm to enter the "Motion Detection" page.

2. Click and drag the left mouse button across a targeted zone to draw a red rectangle on the image (coordinates provided below).

    NOTE: You can set more than one targeted zone depending on your requirement.

3. Click the right mouse button to see the popup-menu. After setting the target zone, please click "Save setting".

4. Enables / disables the motion detection function.

5. Set up the sensitivity.

6. Click the **Submit** button to submit the new setting of the recording.

7. Click the **Home** button to return to the home page.

Description of function keys:

   The targeted zone: Click and drag the mouse across the targeted zone to draw a red rectangle on the image.

   Detection Range: The red rectangle's coordinates.

   Save: Click to save the motion detection range.

   Motion Detection: This option enables / disables the motion detection function.

   Sensitivity Level: You can select any one of the given options for the setup signal level or just type in the value of Customized Threshold.

5.1.6 Change the SD card Setting

Please follow the steps below to change the SD card setting through the network if necessary.

● *Change the SD card Setting — FILELIST of MEMORY CARD.*

Please follow the steps below to change the setting via the network if necessary.

1. Click the "SD card" button at the bottom of the home page to enter the page containing the

    "FILELIST of MEMORY CARD". The page comes in two modes, the JPEG and the AVI

    (please refer to the "SD card Application Setting Page").

2. Click the desired file to display the images therein.

3. Each file can be deleted by clicking the attached "DELETE" hyperlink.

NOTE: You can't directly click the hyperlink of the file in the "**FILELIST of MEMORY CARD**" page

with the right button of the mouse focus then click "**SAVE**" to save the file.

CAUTION: If you wish to save the SD CARD files from a camera to your computer, you can enter

the JPEG column in the "**FILELIST of MEMORY CARD** " page to click in and enter the

particular files in the column. When you click in, the images concerned will appear.

Move your mouse focus within the image area and click the right button of the mouse. A

table of item entries will show up. Click "**Save**" and select the path by which to save your

files.

5.1.7 Change the Pan/Tilt setting

Click the **Pan/Tilt** button on the home page to open the Speed Dome Controller.
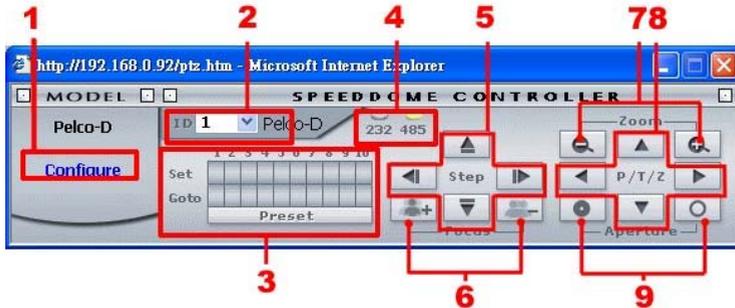
1. Click "**Configure**" to enter to the RS485 setting page (please refer to *Change the System Setting — RS485 Setting*). Select a Speed Dome device ID from the drop-down list on the Speed Dome Controller. The Controller will display the corresponding ID.

2. Each of the ten buttons under 'Set' is connected with a specific position and angle of either panning or tilting of the camera. Click each button to activate its particular position and angle. Press the button under 'Preset' to turn the camera angle by angle in the set positions. Each of the ten buttons designated 'Go to' can be clicked to view the particular corresponding angle of the position in which it is set.

3. Select the connecting port. The RS-485 communication ports function as connectors when two or more units are serially connected to an external control device.

4. Upon the buttons being clicked, a camera will move one short step only in any of the four designated directions.

5. Click the buttons to control the Focus setting on the Speed Dome Controller. Click "**+**" button to focus far and click the "**–**" button to focus near.

6. Click the buttons to control the Zoom setting on the Speed Dome Controller. Click "**+**" button to zoom in and click the "**–**" button to zoom out.

7. Upon the buttons being clicked, a camera will turn all the way, without stopping, in one of the four designated directions.

8. Click the buttons to control the Aperture setting on the Speed Dome Controller.

5.1.8 PPPoE & DDNS

Using the PPPoE

1. Install the XDSL software (obtained from your ISP dealer) in your PC.

2. Search your IP Camera's IP address: you can use your Network Viewer's Scan IP program, or just connect the IP Camera and the Video monitor. The monitor screen will show the IP address on its right side.

3. Change the switch on the IP Camera's side panel to position # 4.

4. Installing an IP address in your PC or notebook.

    Desktop → Move the mouse focus to the Network neighborhood and click the right key of the mouse → Choose the properties → Choose your local connection → Choose the properties and select the configuration → Select the TCP / IP → Choose the properties → Type in the IP address in a four-part formula, for example "192. 168. 1.101" (the first three parts must be identical to the above numbers, only the last part can be changed to your own number, which must never exceed 255) → Click the mask and the mask input, namely "255. 255. 255. 0" (a fixed formula) → Click "OK" → Click "OK".

5. Desktop → Choose IE browser → Type in the IP Camera's IP address in the URL (check step # 2 above) → Enter → IP Camera images will appear.

PPPoE Settings

1. Enter the IP Camera home page → Choose the network → Type in "User Name: admin" and "Password: 9999" → Click "OK'.

2. Choose PPPoE → PPPoE mode: Select "ON" → Type in "Account" → Type in "Password" → Submit → Unplug the power connection.

3. Plug in the IP Camera and it will receive an IP address from the ISP dealer (this IP address is dynamic --- every time you unplug and plug in again you'll get a new IP address).

Test: Go to the Internet.

1. Set your PC to enter the Internet.

2. Desktop → IE browser → Type in the IP Camera's IP address (the same address as in the PPPoE settings and step 3 above) → You can see the IP Camera images.

DDNS settings

1. Check your IP Camera's IP address (Scan IP software or monitor) → open your IE browser → Use the address to connect to the IP Camera or view the images → Choose the network → Type in "User name : admin" and "Password : 9999" → Click "OK" .

2. Choose the "DDNS" → Click "Enable DDNS" → Enter the "DDNS host name", for example "abc123. homeip.net" → Type in "DDNS Account", for example "abc123" → Enter the "DNS Password", for example "7777" → Submit → The settings are now complete → Close the IE browser.

3. Open the IE browser again → Type in the Website address you just applied for, such as "abc123.homeip.net" → You can look at your IP Camera images right away. The procedure is complete.

Note: These settings are only for your ADSL Dynamic IP configuration. If your configuration is fixed (true IP), you don't need to proceed with the PPPoE and DDNS settings. The DDNS is just for your convenience.

5.2 The IP Camera CMS (Central Management System)

This section provides instructions for installing and using the **Central Management System** (CMS) which is included with the IP Camera. The programs can be operated by a selected PC equipped with the following requirements.

System Requirements

- Intel Pentium 1.5 GHz processor or above (2.8 GHz or higher recommended).
- 128-MB RAM at least (256-MB or higher recommended).
- Windows 2000, XP or above.
- 4 MB VGA card capable of 24-bit true color display.
- 100 MB free hard-disk space for software installation.
- 10/100 Base-TX network for LAN operation.
- The Microsoft Internet Explorer 6.

In the multi-channel recording mode, the HD data transfer rates must be 66MB or above (100MB or higher recommended).

5.2.1 Introduction to the CMS

The **CMS** allows you to access many units of the IP Camera from a remote desktop or a laptop in a TCP/IP networking environment. It can perform the following functions.

- **Views live images in a smooth sequential flow from an IP camera.**
- **Stores, searches, and reviews recorded video from a PC or an SD card quickly.**
- **Changes manual record, event record, and schedule record settings easily.**

Before you are ready to view images from a desktop, you need to have your IP Camera networked by obtaining a 10/100 base-TX Ethernet data cable (Standard RJ-45) to connect the IP Camera to your LAN/WAN. Now enter the main menu to set the IP address.

5.2.2 Install the CMS in your PC

Install the CMS from the supported CD-R.

1. Exit all applications currently running in the selected PC.

2. Insert the supported CD in the CD-ROM drive. The program will execute the installation automatically. Follow the on-screen instructions to proceed with the rest of the installation procedure as they appear.

   NOTE: The program will update the .NET Framework to version 2.0 automatically. Please click "**Next**" to start and finish the setup process.
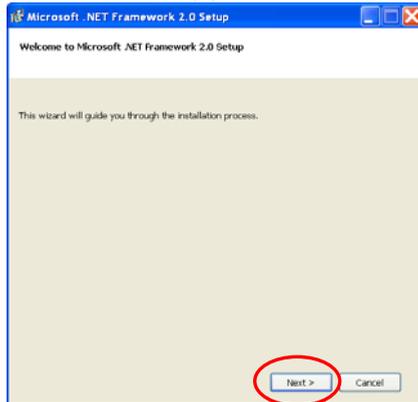
3. Select a language of the installing process from the drop-down list in the "Installer Language" window.

4. After the installation is complete, pop up the **START** menu from your computer, and point to **Programs / APPRO CMS / APPRO CMS** to open up the program selection page as shown below. Click the **APPRO CMS** tag to start the **CMS** program.

Install the CMS for the ZIP file.

1. Save the ZIP file to your PC and extract the file to a designated directory.

2. Open the extracted folder. The folder contains 1 file.

3. Click the **setup** icon to execute the installation and then follow the on-screen instructions to proceed with the rest of the installation procedure.

4. After the installation is complete, click the **START** menu from your computer, and point to **Programs / APPRO CMS** to start the **CMS** program.

NOTE: Please make sure the TCP/IP communication software has been properly set and configured in your computer. To check your TCP/IP settings, please refer to section 4.5 (the TCP/IP configuration setting).

5.2.3 Login the IP Camera software

Once the **CMS** is executed, a Login prompter will appear. You must enter the default user name: **admin**, and the password: **9999** in the respective spaces (and confirm the password again the first time you log in). Click the "**OK**" button and enter the console page of the **CMS**: both the user name and password must be entered correctly. Click the "**Cancel**" button and exit the login of the **CMS**.
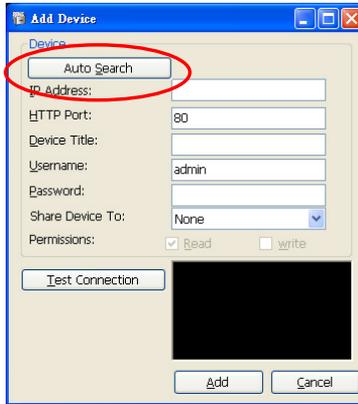

View the IP Camera video from a remote PC

Follow the instructions below to use the **CMS** to browse an IP Camera video from a remote location. Upon entering the **CMS**, a connection box will appear as follows.
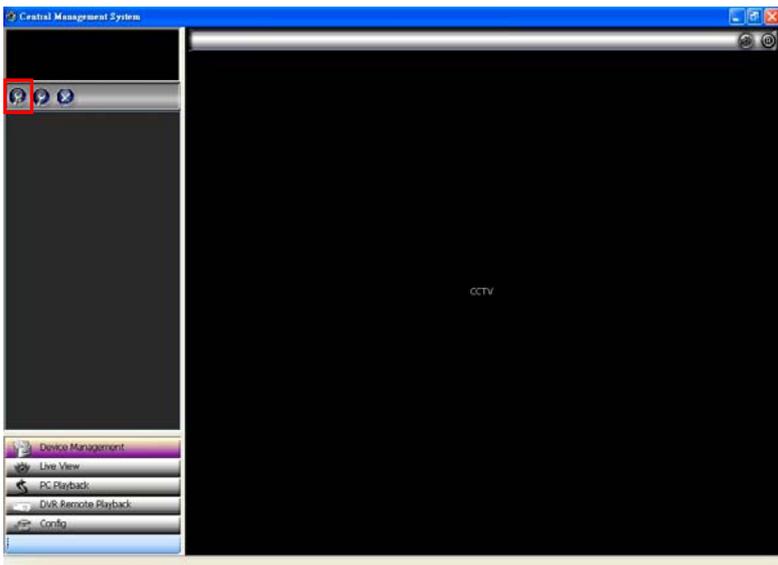
1. Press the （Add Device) button on the Device Management page.

2. Add a channel from the **Add Device** page.

3. **(1)** Click the **Auto Search** button at the bottom of the "**Add Device** " page to discover the connection of the IP Camera-type device in the LAN. Instantly the "**Search Device**" page will appear. Click the device of your choice and click "**Add**" at the bottom of the page to access the "**Add Device** " page again.
   (2) This page provides the IP Address and the HTTP Port. After typing the Device Tile, Username, Password and selecting the share device function or the permissions function, please click the "**Add** " button to establish the connection between the device and the computer.

4. Click the device title to begin viewing images with this camera from the device list.

**NOTE: To add more connections or units to the IP Camera, please repeat the above instructions.**

NOTE: Please click the Test Connection icon to test the connecting situation and preview the video of the IP Camera.

5.2.4 Operation

5.2.4.1 Device Management

Once the connection has been established, click the [Device Management] button to enter the Device Management window (see the sample screen below.) On the left side of the window is the connected device that has been arranged when you established the connection.
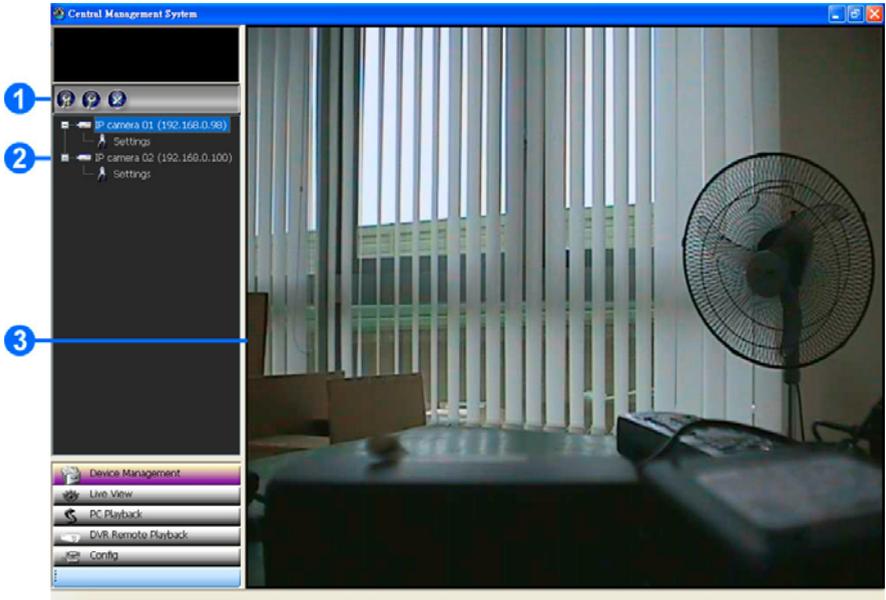
① **Add device:**
Add a new device. For more details please refer to section 5.2.3.

Modify device:
Modify the added device. Please select a device, then click this button to edit the device.

Delete device:
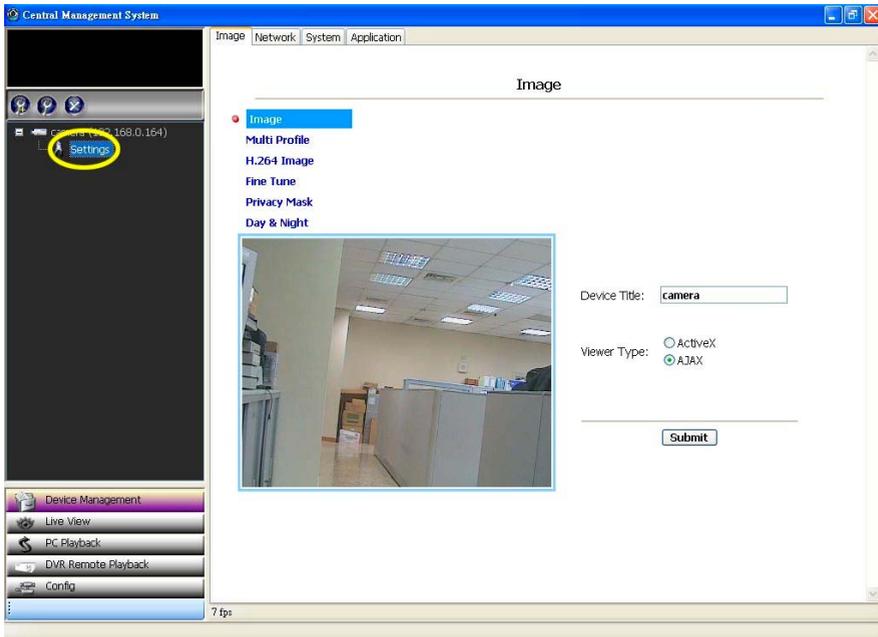Delete the added device.

Device Setting:
For the further setting of each channel, please select the device title on the left side and click the setting button to enter the setting pages of the device.

List of devices:
② The users can click the title of the device and use the icons above the list to change the device settings.

③ **Display area:**
Click the title of the device, and you will see the live image in this area.

NOTE:

The Device Setting page:

For the further settings of each channel, please select the device title on the left side and click the setting button to enter the setting pages of the device.

Click the "Setting" button to bring up the device-setting pages. You can interchange between four buttons: the "Image", "Network", "System" and "Application".

The method of operation is the same as the Microsoft Internet Explorer setting pages (please refer to section 5.1 for more details).

5.2.4.2 Live View

Press the [Live View] button to enter the Live View page.
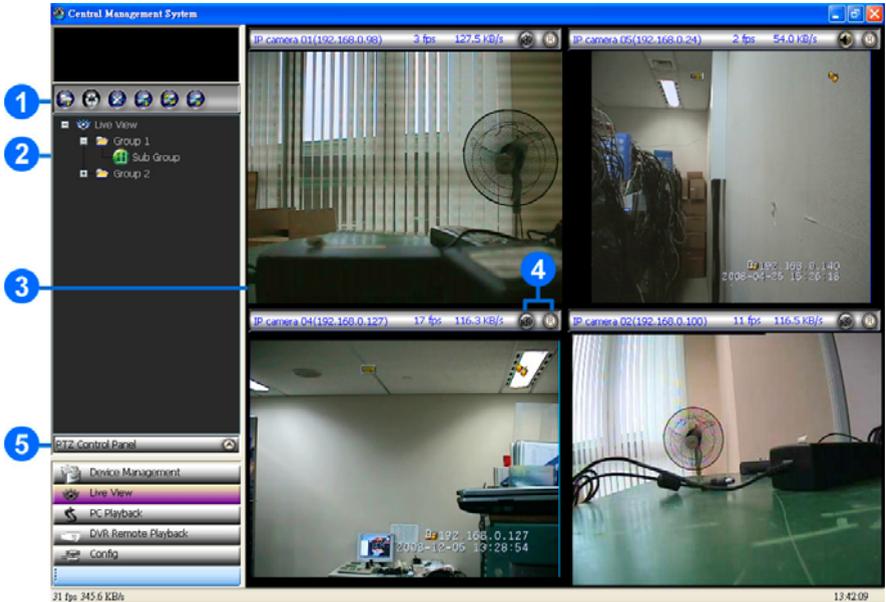
Add Live View Group:
① Press to add a new group of the live view. To change the group name, please left click twice on the title of the group, and then enter the new title.

Group Sequence:
This button enables you to see the sequential display of the group. Please select the group, and then click this button to start the display.

Delete Live View Group:
1.) Select the Live View Group you want to delete from the list. **2.)** Press "Yes".

Add Sub Group:
1.) Click the button to open the **Add Sub Group** window. **2.)** Select the **Square Division** from the drop-down list: "**Division 1**" (◻single window), "**Division 4**" (⊞ 4-windows), "**Division 9**" (▦9-window) and "**Division 16**" (▦16-window). **3.),** Now press the "**Add**" button.

Modify Sub Group:
1.) Click the button to open the **Modify Sub Group** window. **2.)** Select the **Square Division** from the drop-down list: "**Division 1**" (◻single channel), "**Division 4**" (⊞ 4-windows), "**Division 9**" (▦9-window) and "**Division 16**" (▦16-window), **3.)** Check mark the "Cover Original Name" or don't, **4.)** Press "**Modify**" button.

Delete Sub Group:
1.) Select the division mode you want to delete from the list. **2.)** Now press "Yes".

② **List of divisions and its groups:**
The users can left click twice on the title of the list to change the groups' names or the divisions' names.

③ **Display area:**
Click the title of the division, and you will see the live image in this area.

④ **Audio function:** 🔊 The audio function is not available.

The audio function is available. Press to activate the function and the icon will turn purple " ". Press again to deactivate the function.

Recording function: The recording function is not available.

The recording function is available. Press to activate the function and the icon will turn red " ". Press again to deactivate the function.

⑤

PTZ Control Panel:

Press the button to expand the PTZ Control Panel;

press the button to minimize the PTZ Control Panel

 , , … : The direction keys

Speed: Here you have a drop down list of speed dome rates from 1 to 63. 1 is the lowest rate and 63 the highest. You can set any one of these to control your speed dome rate.

(Preset): Click this button to save the preset position.

(Preset Goto): Click this button to automatically view the preset position number you have selected.

(Preset Clear): Choose any one preset position and click this button to delete your choice.

(Preset Position number): There's a drop down list here from which you can choose the preset position you want.

 (Auto Scan): Click this button to view preset positions 1 to 8 automatically.

 (Stop Auto Scan): Click this button to stop auto scan.

 , and : The Tour function keys.   and : The Zoom function keys.

 and : The Aperture function keys.   and : The Focus function keys.

: Flip: Click this button to turn the camera180 degrees horizontally.

: Zero pan: This button enables you to return the camera to the original direction it was facing.

: OSD: Click this button to activate the OSD in the dome device menu -- the OSD enables you to select or change your remote settings.

NOTE: Add a camera video onto the Live View area: (1) Click the title of the camera that was connected. **(2)** Click the right mouse button of the mouse on the live view area, then click left to select a camera from the list. The video from the new camera will be displayed. **(3)** In the Live View area, if you want to change/delete the videos of cameras or use the snapshot/ full screen function, you can click the right mouse button again on the live view area, then click left to select.

NOTE: When there is a detection of external devices such as a sensor, it will display a red color bar on the title-displaying area and start to make an alarm sound to warn the user.

NOTE: How to set the preset position: Choose a preset position number, and then use the "Tilt" and "Pan" direction keys to find the camera angle you want. Now click the "Preset" button to save your position. You can similarly set other preset positions -- please note -- *by first changing the position number.* Now click the "Auto Scan" button to view preset positions 1 to 8 automatically.

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5.2.4.3 PC Playback

Press the [🏂 PC Playback] button to enter the PC Playback page.
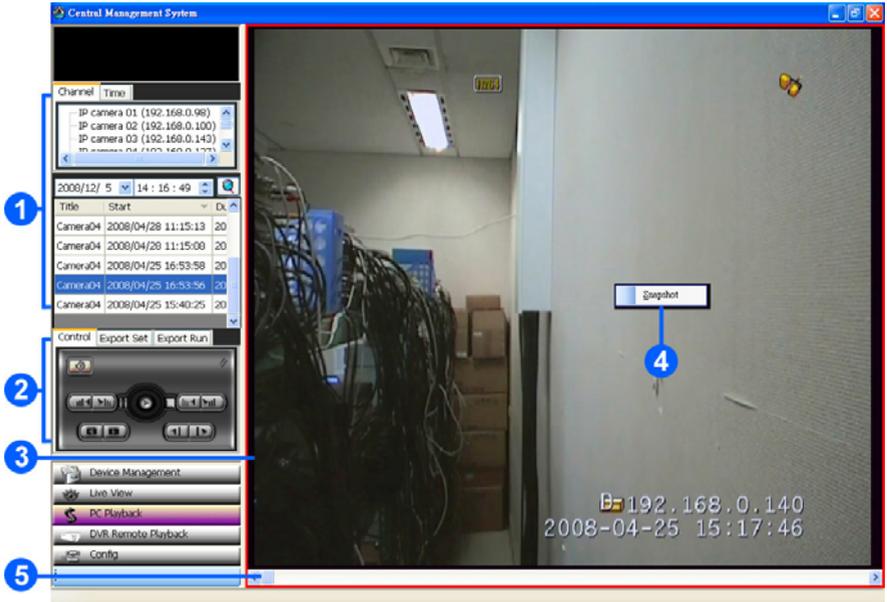
① [Channel]   Click to choose the recording list by channel.

    [Time]   Click to choose the recording list by time search.

    🔍   Enter the MONTH /DAY /YEAR /HOUR /MINUTE you wish to search and click the button to proceed.

NOTE: The recorded video list box will show the recorded video which are stored in the HDD of the connected devices by channel or by time.

    [Control]: Click to use the playback-controlling panel.

    🔊: Click to display the volume control panel.

② ⏸ / ▶ / ⏹ : Pause/ play / stop. "Play": Click to stop playing back the recorded video. "Pause": Click to freeze the image. "Stop": Click to stop playing back the recorded video.

    ◀◀ / ▶▶ : Slow motion rewind/ forward.
    Slow reverse and forward (**1x, 2x, 4x, 8x, 16x**).

    ◀◀ / ▶▶ : Speed up rewind/ forward.
    Fast reverse and forward (**1x, 2x, 4x, 8x, 16x**).

    ◀◀ / ▶▶ : Goto previous/ next record.
    Click to select the previous/ next recorded video.

    ◀ / ▶ : Step back/ forward.
    Click to play a recorded video step by step in the reverse/ forward direction.

Export Set: Click to set the export function. The function fits the starting and ending points of an image display, when the user wants to transfer a file.

Start/ End time: Set the start and end time that you want to export (backup) the recorded files to the AVI files.
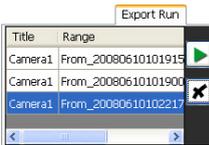
    Note: You also can click to select the recorded file on the recording list above.

Fully Export : Click to add the whole selected video to the arranged exporting list.

Add : Click to add the selected part of the recorded video (with time setting) to the arranged exporting list.

Reset : Click to reset the Start/End time.

Export Run: Click to start to run the export function.

▶ : Click to run the export function of the selected work on the list.

✖ : Click to delete the arranged work.

NOTE: To change the folder of saving the exported AVI files please go to the Config setting page (**Config\ Custom\ Path Settings\ Folder for Export AVI Clips**).

③ The display area.

④   **Snapshot**   Provides the image capturing function. Click the right key of the mouse on display area to show this icon, then click left to capture a jpeg file of the video.

⑤ Scroll bar for video searching: Drag the square on the bar to search the video. You can click or pull the indicator on the scroll bar to the point you want to see.
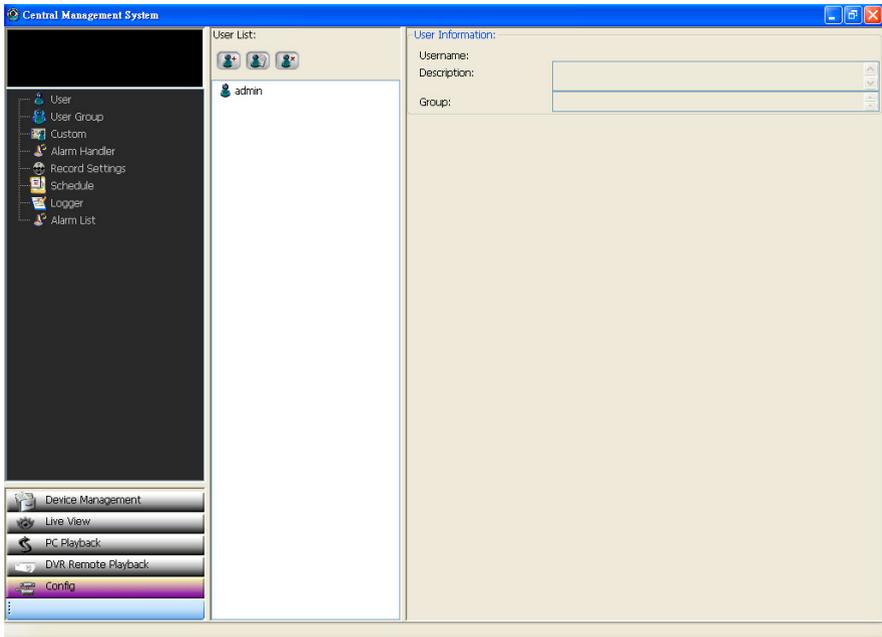
5.2.4.4 DVR Remote Playback (for DVR devices only)

Press the ![DVR Remote Playback] button to enter the DVR Remote Playback setting

page. This setting page is for connecting with the DVR devices
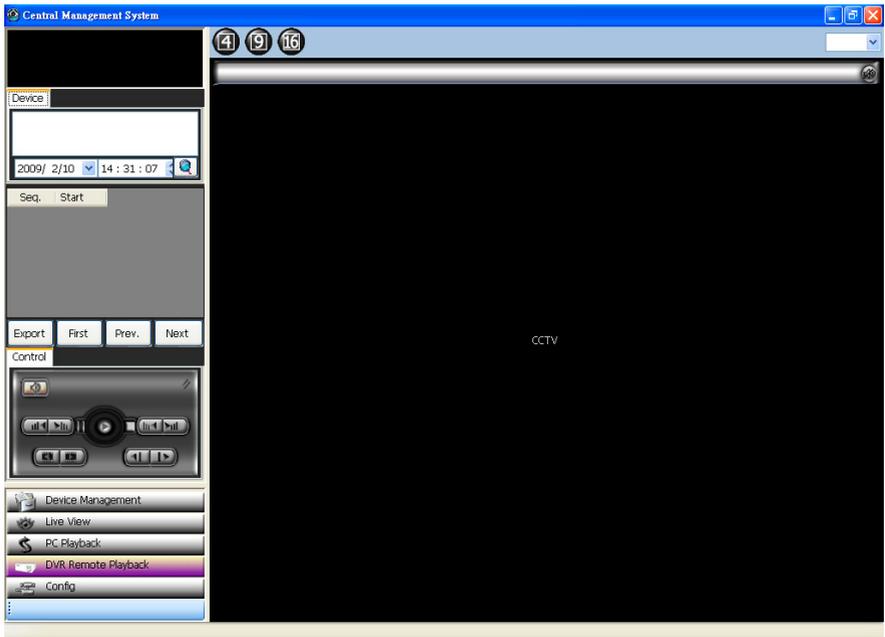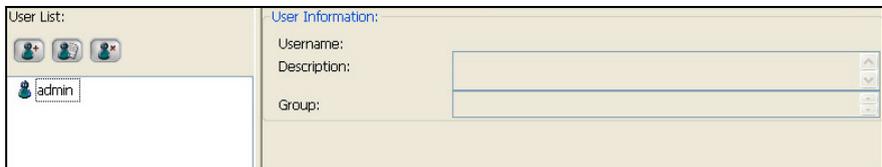
5.2.4.5 Config

Press the [Config] button to enter the Config setting page.

NOTE: After finishing the settings of each page, please click **Save** to save the parameters.

(1) User

Click the [User] icon to enter the User setting page.

User List:
    Add User:
    1.) Click to open the Add User window. **2.)** Enter the information of the Username, Password, Confirm Password and Description. **3.)** Select the User Group if necessary, **4.)** Now press "**Add**".
    Modify User:
    1.) Click to open the Add User window. **2.)** Enter the information of the Username, Password, Confirm Password and Description. **3.)** Select the User Group if necessary. **4.)** Now press "**Modify**".
    Delete User:
    1.) Select a user from the user list. **2.)** Now press "**Yes**".

User Information:
Provides the selected user's information of Username, Description and Group.

(2) User Group

Click the [User Group] to enter the User Group setting page.

User Group List:

Add Group User:

1.) Click to open the Add Group User window. **2.)** Enter the information of the Group Name and Description, then select the Authority. **3.)** Set the member list from the available user list . **4.)** Now press "**Add**".

Modify User Group:

1.) Click to open the Modify User Group window. **2.)** Enter the information of the Group Name and Description, then select the Authority. **3.)** Set the member list from the available user list . **4.)** Now press "**Modify**".

Delete User Group:

1.) Select a group from the group list .**2.)** Now press "**Yes**".

Group Information:
Provides the selected user's information of Group Name, Description and Member.

(3) Custom

Click the [Custom] icon to enter the Custom setting page.

User Interface Settings:
(1) **Language:** Select a language from the drop-down list.
(2) **Date Format:** Select the date format from the drop-down list.

(3) **Font:** Click [icon] to select the font.
Path Settings:

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(1) **Folder for Snapshot Images:** Click [icon] to select

(2) **Folder for Export AVI Clips:** Click [icon] to select the path to save the AVI files.
Image Settings:
Select the aspect ratio: (**NOTE:** The STRETCH status : Images are resized to full screen status. The aspect ratio status: When you resize images, they will retain their natural proportions.)

(1) **AUTO:** The JPEG compression mode comes with the STRETCH status. The MPEG 4 and the H264 compression modes have the aspect ratio status.

(2) **STRETCH:** This status enables images in the MJPEG, MPEG4 and H264 modes to expand to the full screen.

(3) **FORCE TURN ON:** This status enables images in the MJPEG, MPEG4 and H264 modes to remain in the aspect ratio status.

Sequence Settings:
Set the time duration (30, 60, 120, 180 or 300 seconds) from the drop-down list.
Save: Apply the changes.
Undo: Undo the latest changes
Restore Default: Recover to default setting.

(4) Alarm Handler

Click the [Alarm Handler icon] icon to enter the Alarm Handler setting page.
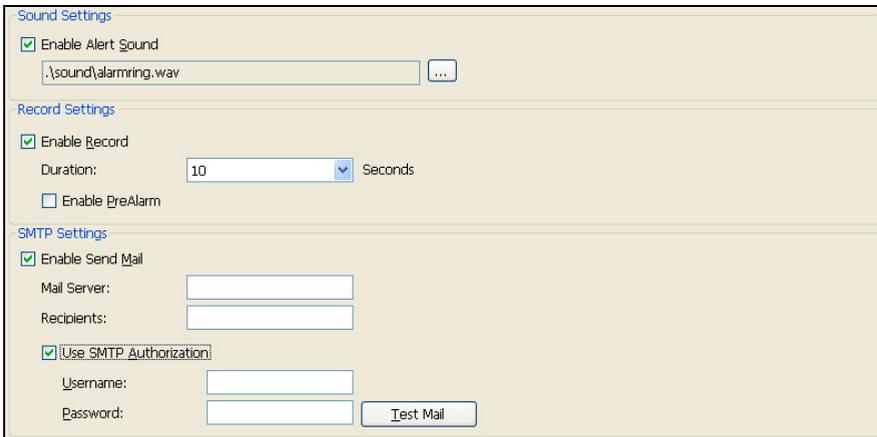
Sound Settings:
(1) Tick mark the blank space to activate it.

(2) To vary the sound file click [...] to change it.
Record Settings:
(1) Tick mark the blank space to activate it.
(2) Select the duration from the drop-down list.
(3) Checkmark "PreAlarm" to activate the pre-alarm function.
SMTP Settings:
(1) Tick mark the blank space to activate it.
   Mail Server: Enter the mail server name.
   Recipients: Enter the recipient's e-mail address.
(2) Set the SMTP and the E-mail address to mail the user when the alarms occur.
Save: Apply the changes.

Undo: Undo the latest changes
Restore Defaults: Recover the default setting.

(5) Record Settings

Click the icon to enter the Record setting page.

①   Click to add a new record saving path.

          Click to delete a selected recording path.

② **Max. Usage:** Set the maximum recording quota from the drop-down list.

    Overwrite: Checkmark to activate the function.

③ **Save:** Apply the changes.

    Undo: Undo the latest changes.

(6) Schedule

Click the icon to enter the Schedule setting page.

① **The setting area:**

    Sets the recording day from the drop-down list.
    Note: After the setting of the starting and ending time is done, select "Daily" to add the same time schedule from Sunday to Saturday.

	Sets the starting time of recording from the drop-down list.
	Sets the ending time of recording from the drop-down list.
	Clicks the icon to enable the just added schedule.
	Clicks the icon to disable the selected schedule.

② **The working area:**

   (1) Click the working area directly to add a new schedule as you wish.

   (2) The functioning schedule bar is colored orange and the non-functioning schedule bar(s) is colored pink. You can just click the right button of the mouse on the functioning schedule bar (in orange color) to cancel it.

   (3) To enlarge the display size of the working area, please click the left button of the mouse on the numeral bar (…) ; on the other hand, please click the right button to narrow it.

   Note: The largest column length is 4 times the default size of the working area..

③ **The schedule bar:**

   (1) Click and drag the left and right edges of the schedule bar to adjust the starting and ending time of the schedule.

   Note: For the exact schedule period setting, please set the day and time in the ① setting area directly.

   (2) Click and drag the middle of the schedule bar to move it. The moved bar is in the same length but the starting and ending times are changed.

④ **Save:** Apply the changes.

   Undo: Undo the latest changes.

   Clear All: Clear all the schedule markers in the current editing area.

(7) Logger

Click the icon to enter the Logger listing page.

Example:

(8) Alarm List

Click the icon to enter the Alarm listing page.

Example:

5.2.4.5 Tray

Press the button to minimize the **CMS** monitor into the systray* of the Windows taskbar.

Right click the button once to select the functions on the list:

CMS
Close CMS
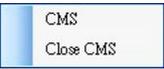
*: The Microsoft Windows systray is a portion of the Windows 95, Windows 98, Windows ME, Windows NT, Windows 2000, and Windows XP Operating Systems that help display running programs. The systray is located on the taskbar and is commonly in the bottom right hand corner of the screen next to the time display.

6. ADVANCED OPERATION

Question 1:

How to view the live images of the IP Camera via the Microsoft Internet Explorer on the Desktop PCs or the laptop computers in a situation where there are no monitors or television?

◇The way to get the IP address of the IP Camera without a monitor:

There are three ways to get the IP address: Scan IP, UPnP and IP function.

Scan IP: Please refer to **APPENDIX 1**.

UPnP: Please refer to **APPENDIX 2**.

IP function: Please refer to **APPENDIX 3**.

Question 2:

How to set up the motion detection area and its sensitivity? How to record into the SD card for 30 seconds when the motion has been activated and use the Microsoft Internet Explorer to view the recorded files?

◇**Set up the motion detection**
1. Click the **Application** button in the home page.
2. Click the **Motion detection** button on the left side of the page to enter the "ALARM – MOTION DETECTION" page.
3. Click and drag the mouse left button across a targeted zone to draw a red rectangle on the image. You can also draw the other targeted zones as you wish.
4. Please **Enable** the motion detection function.
5. Set up the sensitivity level from: Lowest, Low, Medium and High to Highest.
6. Click the **Submit** button to submit the setting.

◇**Recording the images into an SD card while the motion detection function is working**
1. Click the **Application** button in the home page.
2. Click the **Enable** button below the ALARM item on the left side of the page to enter the "ALARM APPLICATION ENABLE SETTING" page.
3. Tick on "**Enable ALARM-SAVE into SD Card**" to activate it.

4. Click the **Submit** button to submit the setting.

NOTE: Please remember to insert the SD card into the built-in SD slot of the unit first.

◇**Set the recording time (the AVI duration) of the SD card**

1. Click the **Application** button in the home page into the "SD-Card APPLICATION SETTING" page.

2. Choose the **AVI Duration** from the drop-down list.

   If you want to record the file into the SD card for 30 seconds, please choose 30 seconds.

3. Click the **Submit** button to submit the setting.

◇**Use IE to view the recorded files**

1. Click the **SD Card** button in the home page to enter the page containing the "FILELIST of MEMORY CARD".

2. Click the filename which you want to view.

3. It will ask you to enter the username and password.

4. If you didn't set the other player before, the AVI file will be played by the Windows Media Player.

Question 3:

How to use the DynDNS to connect the IP Camera by using its Sub Hostname via the intranet?

◇**Set the DDNS function**

1. Click the **Network** button in the home page.

2. Click the **DDNS** button on the left side of the page to enter the "DDNS SETTING" page.

3. Tick on the "Enable DDNS Function" to activate it.

4. Choose one of the DDNS Types from the drop-down list.

   If you didn't register for a DDNS before, please choose one of the DDNS Type then press "Apply" button to its registering homepage and register as a member.

5. Enter the DDNS Host Name, DDNS Account and DDNS Password which you created in the www.dyndns.com website.

6. Click the **Submit** button to submit the setting.

   NOTE: Please refer to the **APPENDIX 4** for more details.

◇**Set the PPPoE function**

1. Click the **network** button in the home page.

2. Click the **PPPoE** button on the left side of the page to enter the "PPPoE SETTING" page.

3. Choose "ON" from the "PPPoE mode" list to activate it.

4. Enter the Account and the Password which are provided from your ISP.

5. Click the **Submit** button to submit the setting.

NOTE: Please refer to section **5.1.8** for more details.

◇**Use the Sub Hostname to view the IP Camera**

1. Click the URL block at the top of the PC screen.

2. Type in the DDNS Host Name of the IP Camera into the URL block and press the "**Enter**"
   button to enter the login page.

3. Enter the user name and fill in the password.

4. Click the "**OK**" button and enter the home page of the IP Camera.

Question 4:

How to set the scheduled record on from, say, 6:00 PM to 7:00 PM with the recording rate of

1F/8S and upload the recorded file to the FTP server?

◇**Set the scheduled recording time**

1. Click the **Application** button in the home page.

2. Click the **Schedule** button on the left side of the page to enter the "RECORD - SCHEDULE"
   page.

3. Select one of the schedules and set the recording time period.

4. Tick the schedule on to activate it.

   For example, if you want to set the schedule record on from 6:00 PM to 7:00 PM, please
   choose "FROM 18:00 to 19:00" on the drop-down list. Then tick on the schedule which you just
   set.

5. Click the **Submit** button to submit the setting.

◇**Upload the recorded file via the FTP**

1. Click the **Application** button in the home page.

2. Click the **Enable** button on the left side of the page to enter the "RECORD APPLICATION
   ENABLE SETTING" page.

3. Tick on "Enable RECORD - UPLOAD via FTP".

4. Click the **Submit** button to submit the setting.

◇**Set the upload rate**

　1. Click the **Application** button.

　2. Click the **FTP** button on the left side of the page to enter the "FTP APPLICATION SETTING"

　　page.

　3. Set the last item "Upload Rate" at the bottom of the page to the rate you want.

　If you want to record at the rate of 1F/8S, please choose "1F/8S" in the drop-down list.

Question 5:

How to add or modify the users and their authorities of using the IP Camera?

◇**Entering the setting page**

　1. Click the **System** button in the home page.

　2. Click the **Users** button on the left side of the page to enter the "SYSTEM - USERS" page.

◇**Add a new user**

　1. Please enter the user name, the password, the confirmed password and choose the authority.

　　There are three different levels of authorities, namely Admin, Operator and Viewer.

　　Admin: The user who accesses with the admin name and password has the full power to even

　　　　　　change the settings of the IP Camera.

　　Operator: The suggested choice for normal use.

　　Viewer: The user who accesses with just the viewer name and password has only a limited power

　　　　　to view.

　2. Click the **Submit** button to submit the new user's setting.

◇**Modify the user**

　1. Click the user name you want to modify on the **User List**.

　2. Enter the password, the confirmed password and choose the authority.

　3. Click the **Submit** button to submit the new setting.

◇**Delete a user**

　1. Click the user name you want to modify on the **User List**.

　2. Click the **Delete** button.

7. SPECIFICATIONS

LC-7314 H.264 CCD Box IP-Camera (PAL)		
Video system	Video sensor	1/3" Sony Super HAD CCD (with HQ1 DSP)
	Horizontal resolution	520 TV Lines
	Lens	C / CS mount
	Auto Iris	DC drive
	AES	1/50 ~ 1/100000 sec
	Min. illumination	0.5 Lux @ F1.2
	Day & Night	Yes (Mechanical IR-Cut filter)
Image system	Video compression	● Simultaneous H.264 & MJEPG video streaming. ● Simultaneous multi-profile video stream. ● Controllable frame rate and bandwidth
	Resolutions	Full D1 / Half D1 / CIF / QCIF
	Frame rate	Up to 25 in all resolutions.
	Image quality	5 levels
	Image configurations	AGC Gain, Contrast, Brightness, AWB, BLC, Sharpness, Saturation, Fluorescent, Private mask (3 areas).
Audio	● Built-in Microphone / external audio input x 1 ● Audio compression: u-law	
Network system	Support protocols	HTTP, HTTPS, TCP, SNMP, RTSP, RTP, RTCP, DHCP, UPnP, ARP, DNS, DynDNS, SNTP, PPPoE, 3GPP
	Security	Multiple authorities levels / IP filtering
	Users	8 simultaneous user access
Connectors	● Ethernet 10BaseT/100BasetX, RJ-45 ● 12 pin push-in block for: alarm input / alarm-out / RS-485 / DC Out /audio input / audio output /	● SD card slot ● USB connector BNC output for analog signal output ● DC/AC jack connector
Application	Alarm management	● Alarm triggered by build-in motion detection / external alarm-in / Video loss / Reboot / Manual ● Alarm can be managed by schedule ● Alarm notify to ANNP / *email / *FTP / SD card / alarm-out
	Video management software	● Build-in Web server ● APPRO-CMS Lite
	System integration	Comprehensive development SDK kit, including HTTP-API / ActiveX control / Customized Web page tool
	Update	SD card / HTTP / FTP
Miscellaneous	LED indicator	Power / Network status
	Power	● Power over Ethernet(IEEE 802.af) ● DC 12V ● AC 24V
	Temperature	0 – 45C
	Platform	TI Davinci DM355
	Accessories	CD x 1 Quick installation manual x 1 Camera bracket x 1 Power adapter x 1 USB connection line x 1

*Specifications are subject to change without notice.

8. Functions of client PC

System requirement	Windows 2000, XP or above
Browser	IE 6.x
Live Monitor	Max. 16 Split , Real Time REC/ Capture/ Audio/ Live Event/ Full Screen
Playback Viewer	Playback, Time / live event Search / Export (JPEG / AVI)
Settings	Device/ System/ Camera management/ web page
Multi-camera link	Max. 16 camera

APPENDIX 1. –SCANIP

Follow the instructions below to use the SCANIP software to search the IP camera devices

from a local location.

1. Click the ![Refresh] button to discover the connection of the all-type device in the LAN. The

   Device Type will display the connection of the all-type device.

2. Select the desired device from the **Device Type**.

3. Click the desired device to show the window while the IP camera information acts to display

   the desired changes instantly.

4. Do you want to manually set the IP?

   i.   If you want to manually set the IP of the device, please select the desired

         device from the **Device Type** then click the ![Set IP] button.

   ii.   The software will provide the "Free IP Address" boxes on the right side of

         the window.
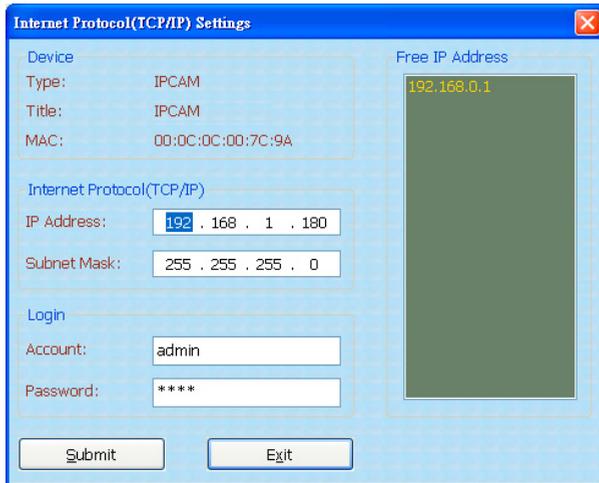
  iii. Select and double click any of the addresses in the "Free IP Address" box

      on the right to enter it into an IP Address on the left.

  iv. To change any IP address, type in the new address in the "Free IP Address"

      box on the right as well as the device's login "Account" and "Password" in

      their respective blanks at bottom left, then click "Submit", and the new

      address will automatically be sent to the device.

  v. Click "Exit" at bottom right to shut the device.

5. Link to the homepage of the selected device:

 Select the desired device from the **Device Type** then click the button to connect to

 the homepage of the device.

APPENDIX 2. –IP Camera UPnP How To

The most troublesome issue when you setup an IP Camera® is that you have no idea what the IP address of this device is. Now IP Camera® supports the UPnP (Universal Plug and Play) protocol which makes it easier for you to examine it; however, it is a pity that Microsoft Windows XP® doesn't start this service by default. Therefore, the following procedures will help you to turn it on and discover your IP Camera® step by step as shown in Figure1 below.
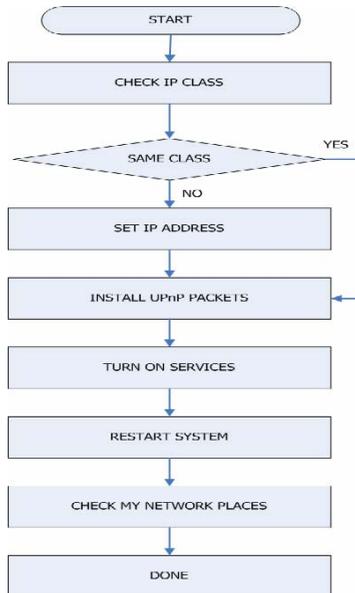

Figure 1 UPnP Setup Flow Chart

1. Check the IP class of your PC

In most case Microsoft Windows XP® will assign an IP address, 169.254.*.*, automatically with a subnet mask, 255.255.0.0, if the DHCP server is absent, while the default IP address of an IP Camera® is 192.168.1.168 with a subnet mask of 255.255.255.0. There won't be any communication due to different IP class domains, and you have to modify the relative settings or the UPnP protocol won't work; however, checking your own IP address is necessary. Here are the procedures to check and modify them.

Step 1: From the **Start** menu, point to **Settings**, and then click **Control Panel**. See Figure 2.
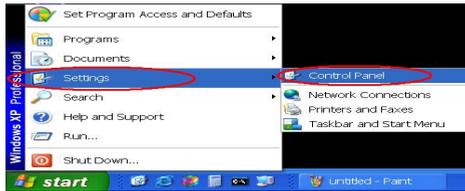
Figure 2

Step 2: When **Control Panel** appears, double-click the **Network Connections** icon. The
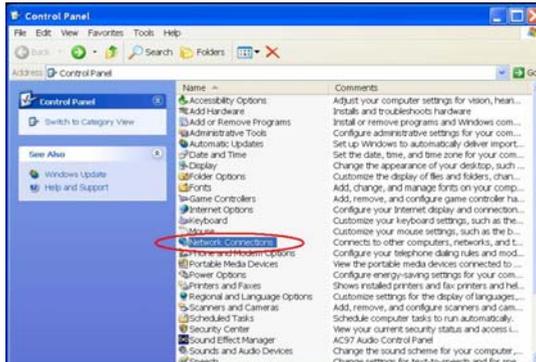
Network Connections dialog box appears. See Figure 3.

Figure 3

Step 3: Click the **Protocols** tab in the **Network Connections** dialog box. See Figure 4.
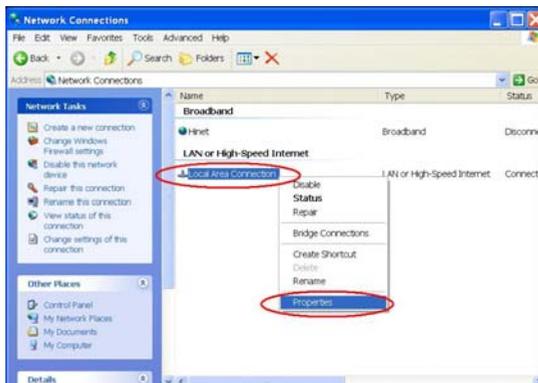

Figure 4

Step 4: When the **Local Area Connection Properties** dialog box shows up, choose **Internet**

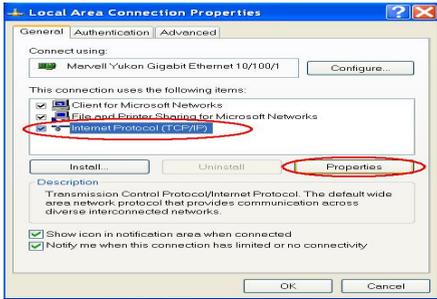Protocol (TCP/IP) and click **Properties**. See Figure 5.

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Figure 5

Step 5: In the **Internet Protocol(TCP/IP) Properties** dialog box, choose **Use the following IP**

Address to indicate that you do not wish to use DHCP, and assign IP Address

192.168.1.200 with Subnet mask 255.255.255.0.

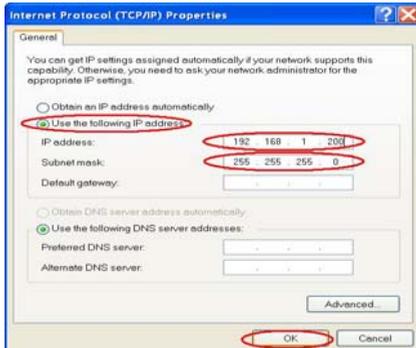Click **OK** when you finish it. See Figure 6.

Figure 6

Step 6: Choose Close to finish the modification. See Figure 7.

Figure7

2. Install UPnP Packets

As described before, Microsoft Windows XP$^®$ doesn't start the UPnP service by default; however, we have to install some packets before we initialize it. The following steps will help you to install them.

Step1: From the **Start menu**, point to **Set Program Access and Default**, and then click it. See Figure 8

Figure 8

Step 2: When the **Add or Remove Programs** dialog box appears, click the **Add/Remove Windows Components** button. See Figure 9.
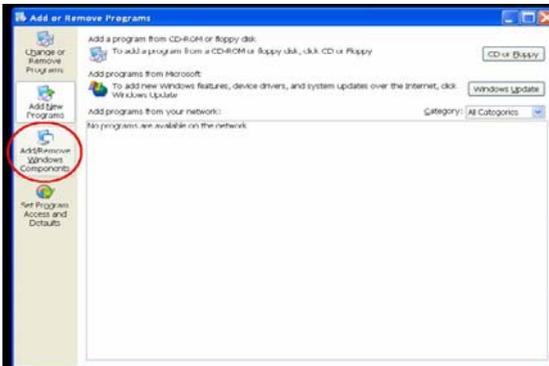

Figure 9

Step 3: Check the **Network Services** in the **Windows Component Wizard** dialog box, and then click **Details…**. See Figure10.
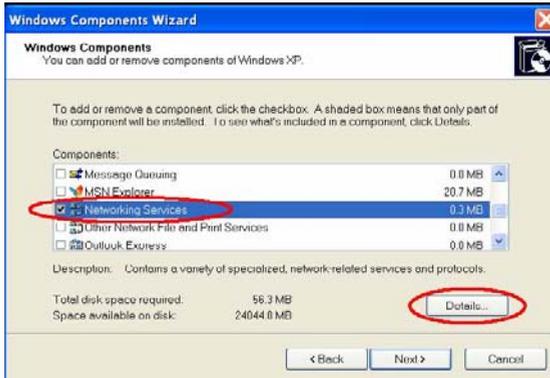
Figure 10
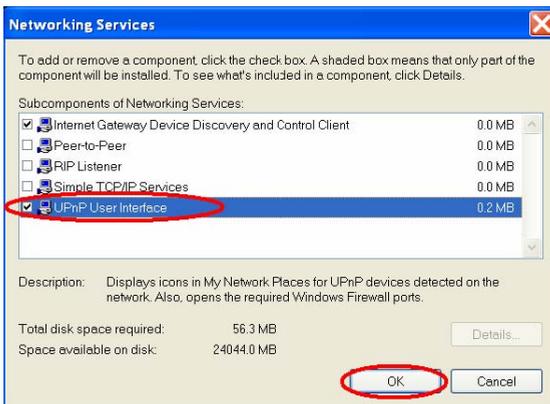
Step 4: Check **UPnP User Interface**, and choose **OK**. See Figure 11.

Figure 11

Step 5: When the original **Network Component Wizard** dialog box returns, click **Next**. See
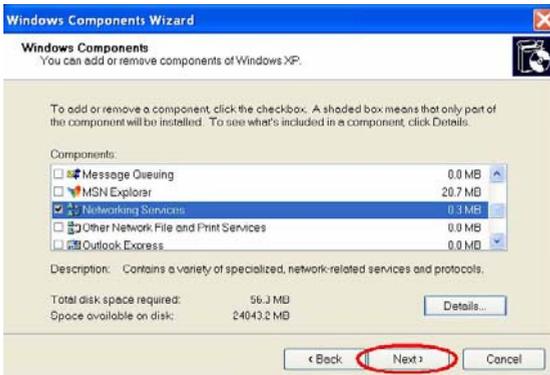
Figure12.

Figure 12

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Step 6: After about one minute the UPnP installation will be done, and choose **Finish** to close it.

See Figure13.

Figure 13

3. Turn on Services

After installation, we should turn on the relative services to start the UPnP protocol. The following

procedures will teach you how to do it.

Step 1: From the **Start** menu, point to **Settings**, and then click **Control Panel**. See Figure14.
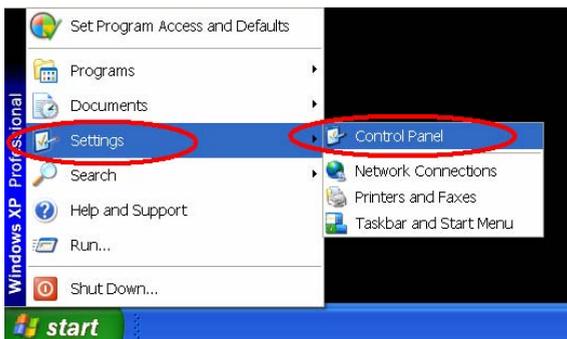

Figure 14

Step 2: When **Control Panel** appears, double-click the **Administrative Tools** icon. The

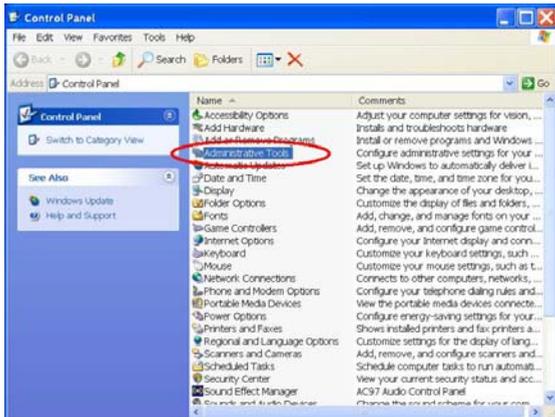**Administrative Tools** dialog box appears. See Figure15.

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Figure15

Step 3: Click the **Services** icon in the **Administrative Tools** dialog box. See Figure16.
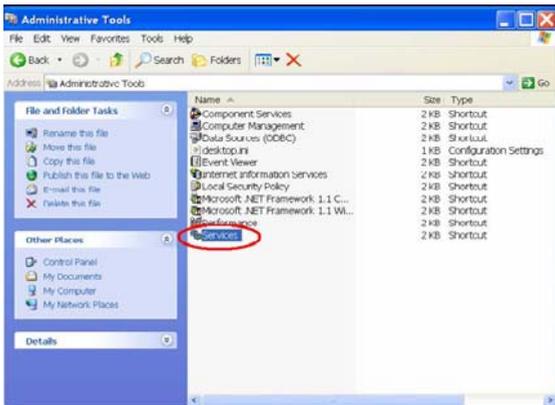

Figure16

Step 4: When the **Services** dialog box shows up, double click the **SSDP Discovery Service**
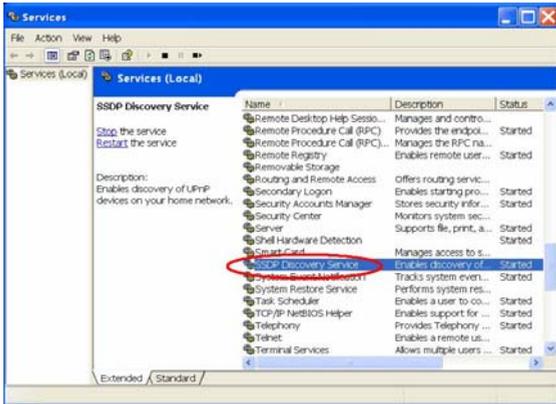
   icon. See Figure17.

Figure17

Step 5: Choose **Automatic** in the **Startup type**, and click **OK** to start it. See Figure18.
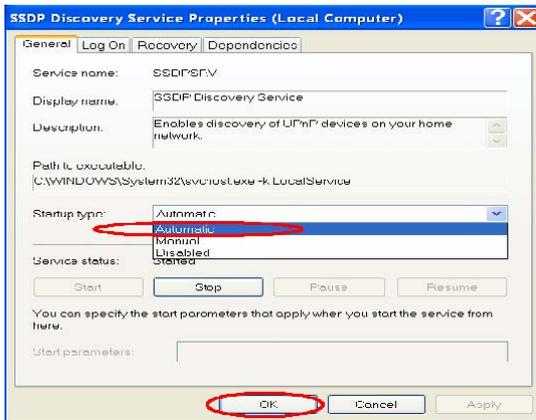

Figure18

Step 6: When the **Services** dialog box appears again, double click the **Universal Plug and Play**
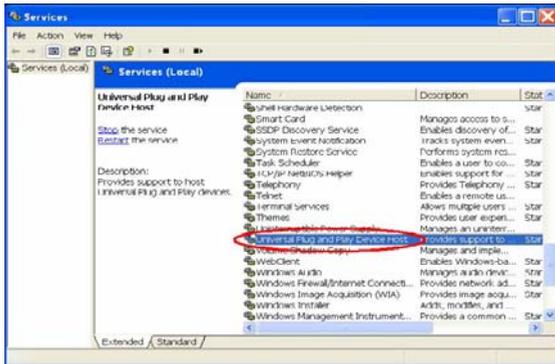
Device Host icon. See Figure19.

Figure19

Step 7: Choose **Automatic** in the Startup type, press the **Start** button, and click **OK** to start it.

See Figure20.
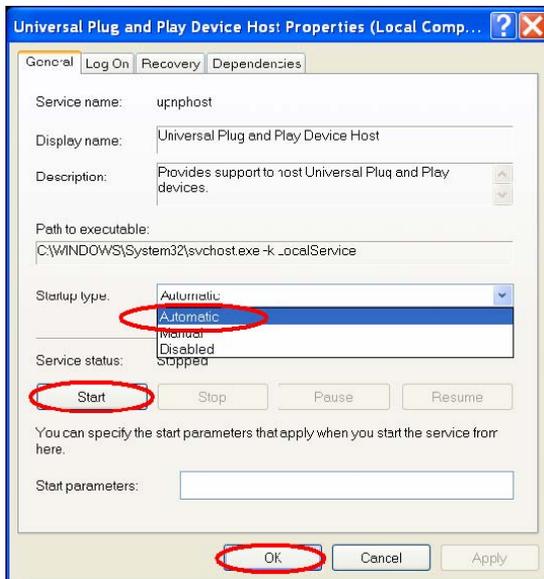
Figure20

Step 8: Restart your system.

After your installation and starting services, the UPnP protocol will take effect. You can scan all IP

Cameras® in My Network Place like Figure21 and Figure22 below.
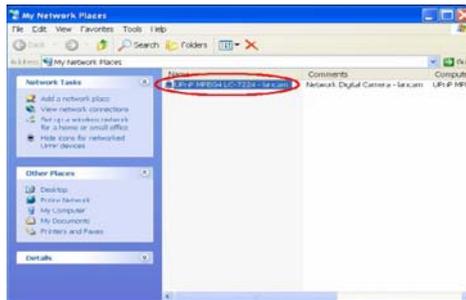
Figure21

Figure22

Just double click the **UPnP IP Camera** icon, and the video live stream will pop up automatically

without assigning any IP address in Microsoft Internet Explorer®.

APPENDIX 3. –The ARP function

Setting the IP Address

The Ethernet interface on the IP Camera has a default IP address (192.168.1.168) that most likely needs to be changed to make it work on your local network. You need to acquire a unique IP address (ask your network administrator). For the initial setting of the IP address the IP Camera needs to be connected to the same network segment as your client, and the IP address can then be configured by using a combination of ARP and ping command.

Use any of the following ways to set the IP address within thirty seconds after booting the IP Camera (re-cycle the power). Setting IP using the method below can only be done on the Ethernet interface.

ARP and ping from Windows or MS-DOS:
The user can open the PC's MS-DOS windows from the WINDOWS 98 operation system, or open the PC's Command Prompt windows from either the WINDOWS 2000 or the WINDOWS XP operation system.

1. Start a DOS prompt window
2. Type the following in 30 seconds after the booting:

   arp -s <IP address> <Ethernet address>

   [**or** arp -s <IP address> < MAC address>]

   ping <IP address>

   Example:

   arp -s 192.168.1.100 00-0C-0C-00-00-01

   ping 192.168.1.100

   The IP address now is: 192.168.1.100.

ARP and ping from UNIX or GNU/Linux:

1. Start a shell

2. Type the following as superuser (root):

    arp -s <IP address> <Ethernet address>

    [**or** arp -s <IP address> < MAC address>]

    ping <IP address>

    Example:

    arp -s 192.168.1.100 00-0C-0C-00-00-01

    ping 192.168.1.100

The device responds to the ping in the examples above if the new address was configured. Note, this method will set the IP address permanently.

Note: The default account and password after the reset are admin and 9999.

APPENDIX 4. –Register as a DDNS member

The DDNS（dynamic domain name system） is a function which is provided by an American

company. Please refer to www.dyndns.com. This chapter provides the user with the basic

instructions on how to register a free DDNS service.

Registering for a DDNS

    Enter the URL www.dyndns.com. In the upper right-hand corner of the main page, where

    there is an item, "Create Account", as shown in Figure 1.

Figure 1

Create an account

    After clicking "Create Account", you will enter the Create Account page. Please complete

    the form at the bottom of the page to create your account. You will receive an e-mail

    containing instructions to activate your account. If you do not follow the directions within 48

    hours, you will need to recreate your account.

Set up the DDNS

    After creating the account successfully, please enter your user name and password in the

    upper right-hand corner of the main page to login, as shown in Figure 2.

    After you login successfully, a text will appear saying "My Services", as shown in Figure 3.

Figure 2

Figure 3

Click "My Services" to enter the service page. Please click the "Add Host Service" item which is below the "My Hosts" item, as shown in Figure 4.

Click "Add Host Service", and its service items will appear. The Add Dynamic DNS Host item helps to add a new DDNS. Each member may have only one free account, and one free account can have only five DDNS.

Click Add Dynamic DNS Host to enter the DDNS setting page as shown in Figure 5.
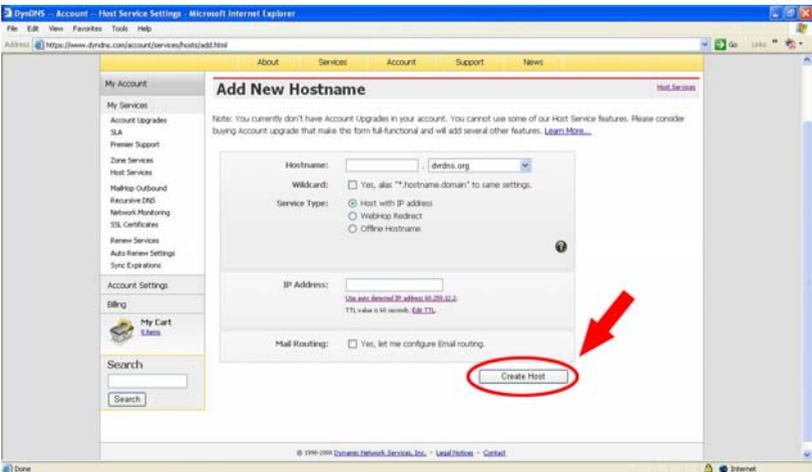
Figure 4

Figure 5

All we have to set in this page is the "Hostname" item. The user can choose a Sub Hostname as s/he likes from the right-hand side of the Hostname's drop-down list.

NOTE: You don't have to set the "IP Address" in the same format as the camera's IP Address. It will renew the IP Address automatically.

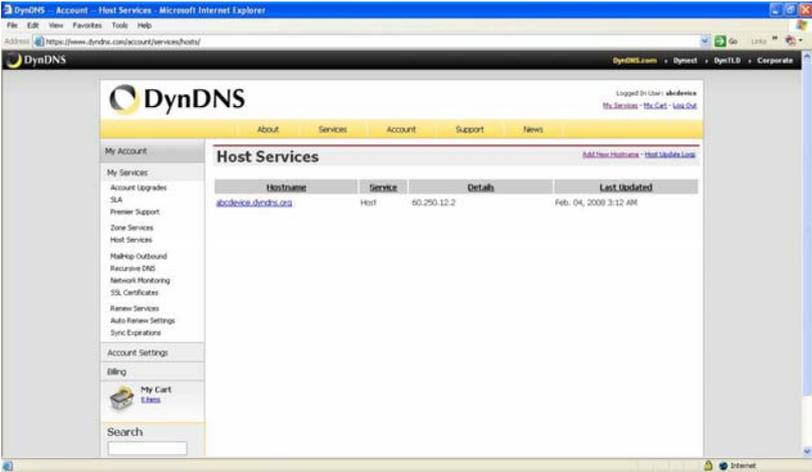After finishing the setting, please press the "Create Host" button as shown in Figure 5.

Figure 6

APPENDIX 5. –FAQ

1. How to disable the DHCP function and use a static IP instead?

A：Turn up the "DIP SWITCH" from "3" to "4" and change the relative network settings, the IP Address, NetMask and Gateway on the image web page.

2. Can the SD card be removed during recording?

A：No, it cannot be removed until the recording comes to a single point. The POWER LED flashing light signals the SD card is operating. The green light indicates the unit is activating. The red light warns the SD card cannot be removed. If the SD card is withdrawn in this mode, the card will break.

3. I've set the function of "Motion Detection" but it doesn't seem to work.

A：Check if "Motion range" and "Sensitivity" have been set before activating the function.

4. My AVI files recorded in the SD card cannot be displayed. What can I do to display the files?

A：Please visit "http://www.morgan-multimedia.com/" to download "Morgan M-JPEG codec" and install it, and then check the selection of the "IJP Core".

5. How to turn on/off the OSD (on screen display) on/off on the IP Camera?

A：Visit the homepage - tailpage.htm of the device, and select "ON" or "OFF" in the OSD column.

Example: suppose the IP address of the device is 192.168.1.168

Type in http://192.168.1.168/tailpage.htm (a registration is needed) and select "ON" or "OFF" in the OSD column.

WARNING: Please write down the IP address of the device before you turn off the OSD.